Class 13: UNIX For Bioinformatics

Tom Quach (A15549142)

11/13/2021

Storing our blast result into b

```
b <- read.delim("mm-second.x.zebrafish.tsv")
b
```

```
##         YP_220550.1    NP_059331.1 X69.010 X313 X97 X0  X4 X316  X10 X322
## 1       YP_220551.1    NP_059332.1  44.509  346 188  3   1  344    1  344
## 2       YP_220551.1    NP_059341.1  24.540  163 112  3 112  263  231  393
## 3       YP_220551.1    NP_059340.1  26.804   97  65  2  98  188  200  296
## 4       YP_220552.1    NP_059333.1  88.132  514  61  0   1  514    1  514
## 5       YP_220552.1 XP_021326074.1  31.818   66  32  2 427  482   16   78
## 6       YP_220552.1 NP_001373511.1  31.818   66  32  2 427  482   48  110
## 7       YP_220553.1    NP_059334.1  70.925  227  66  0   1  227    1  227
## 8       YP_220553.1 NP_001038725.1  28.571   70  46  2  15   84  261  326
## 9       YP_220553.1 XP_005161478.1  28.571   70  46  2  15   84  261  326
## 10      YP_220553.1 XP_021324580.1  28.571   70  46  2  15   84  163  228
## 11      YP_220554.1 XP_002665692.3  25.862   58  42  1   5   61 2588 2645
## 12      YP_220554.1 XP_021324264.1  25.862   58  42  1   5   61 2278 2335
## 13      YP_220554.1 XP_009290033.1  50.000   30  13  1  26   55   42   69
## 14      YP_220554.1 XP_005156656.1  37.931   29  17  1  34   61  167  195
## 15      YP_220554.1 NP_001007391.1  37.931   29  17  1  34   61  167  195
## 16      YP_220555.1    NP_059336.1  52.212  226 107  1   1  225    1  226
## 17      YP_220556.1    NP_059337.1  78.161  261  57  0   1  261    1  261
## 18      YP_220556.1 XP_021330598.1  37.838   37  23  0   3   39   37   73
## 19      YP_220556.1 NP_001139036.1  37.838   37  23  0   3   39   37   73
## 20      YP_220556.1 NP_001070643.1  36.111   36  19  1 173  208  675  706
## 21      YP_220557.1    NP_059338.1  61.207  116  44  1   1  115    1  116
## 22      YP_220558.1    NP_059339.1  53.061   98  46  0   1   98    1   98
## 23      YP_220558.1 NP_001002376.1  57.895   19   8  0  20   38  136  154
## 24      YP_220558.1 XP_005158565.1  57.895   19   8  0  20   38  149  167
## 25      YP_220558.1    XP_706537.4  31.373   51  25  2  40   80   65  115
## 26      YP_220559.1    NP_059340.1  62.582  457 170  1   1  456    1  457
## 27      YP_220559.1    NP_059341.1  23.039  204 146  6 106  306  128  323
## 28      YP_220559.1    NP_059332.1  32.432  111  59  6 198  304   97  195
## 29      YP_220559.1 XP_009301289.1  24.074  108  65  4 169  276  148  238
## 30      YP_220560.1    NP_059341.1  55.126  595 257  8   7  597    9  597
## 31      YP_220560.1    NP_059340.1  23.077  351 246 11 107  442   84  425
## 32      YP_220560.1    NP_059332.1  24.171  211 145  6 226  433  105  303
## 33      YP_220560.1 XP_017210528.1  26.087   69  44  1 365  433  129  190
## 34      YP_220560.1 NP_001159387.1  26.087   69  44  1 365  433  142  203
## 35      YP_220560.1 XP_021330470.1  30.645   62  38  2 164  223  379  437
```

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## 36      YP_220560.1    XP_689554.6  35.417   48  28  1 554  598 1107 1154
## 37      YP_220561.1    NP_059342.1  37.143  140  72  3   1  127    1  137
## 38      YP_220561.1 NP_001038688.1  29.412   85  54  3  33  112  306  389
## 39      YP_220562.1    NP_059343.1  73.810  378  99  0   1  378    1  378
## 40      YP_220562.1 XP_021322416.1  28.704  108  60  4 223  315  263  368
## 41      YP_220562.1 XP_021322415.1  28.704  108  60  4 223  315  263  368
## 42      YP_220562.1 XP_021322414.1  28.704  108  60  4 223  315  310  415
## 43      YP_220562.1 XP_021322413.1  28.704  108  60  4 223  315  310  415
## 44      NP_904328.1    NP_059331.1  69.010  313  97  0   4  316   10  322
## 45      NP_904329.1    NP_059332.1  44.509  346 188  3   1  344    1  344
## 46      NP_904329.1    NP_059341.1  24.540  163 112  3 112  263  231  393
## 47      NP_904329.1    NP_059340.1  26.804   97  65  2  98  188  200  296
## 48      NP_904330.1    NP_059333.1  88.132  514  61  0   1  514    1  514
## 49      NP_904330.1 XP_021326074.1  31.818   66  32  2 427  482   16   78
## 50      NP_904330.1 NP_001373511.1  31.818   66  32  2 427  482   48  110
## 51      NP_904331.1    NP_059334.1  70.925  227  66  0   1  227    1  227
## 52      NP_904331.1 NP_001038725.1  28.571   70  46  2  15   84  261  326
## 53      NP_904331.1 XP_005161478.1  28.571   70  46  2  15   84  261  326
## 54      NP_904331.1 XP_021324580.1  28.571   70  46  2  15   84  163  228
## 55      NP_904332.1 XP_002665692.3  25.862   58  42  1   5   61 2588 2645
## 56      NP_904332.1 XP_021324264.1  25.862   58  42  1   5   61 2278 2335
## 57      NP_904332.1 XP_009290033.1  50.000   30  13  1  26   55   42   69
## 58      NP_904332.1 XP_005156656.1  37.931   29  17  1  34   61  167  195
## 59      NP_904332.1 NP_001007391.1  37.931   29  17  1  34   61  167  195
## 60      NP_904333.1    NP_059336.1  52.212  226 107  1   1  225    1  226
## 61      NP_904334.1    NP_059337.1  78.161  261  57  0   1  261    1  261
## 62      NP_904334.1 XP_021330598.1  37.838   37  23  0   3   39   37   73
## 63      NP_904334.1 NP_001139036.1  37.838   37  23  0   3   39   37   73
## 64      NP_904334.1 NP_001070643.1  36.111   36  19  1 173  208  675  706
## 65      NP_904335.1    NP_059338.1  61.207  116  44  1   1  115    1  116
## 66      NP_904336.1    NP_059339.1  53.061   98  46  0   1   98    1   98
## 67      NP_904336.1 NP_001002376.1  57.895   19   8  0  20   38  136  154
## 68      NP_904336.1 XP_005158565.1  57.895   19   8  0  20   38  149  167
## 69      NP_904336.1    XP_706537.4  31.373   51  25  2  40   80   65  115
## 70      NP_904337.1    NP_059340.1  62.582  457 170  1   1  456    1  457
## 71      NP_904337.1    NP_059341.1  23.039  204 146  6 106  306  128  323
## 72      NP_904337.1    NP_059332.1  32.432  111  59  6 198  304   97  195
## 73      NP_904337.1 XP_009301289.1  24.074  108  65  4 169  276  148  238
## 74      NP_904338.1    NP_059341.1  55.126  595 257  8   7  597    9  597
## 75      NP_904338.1    NP_059340.1  23.077  351 246 11 107  442   84  425
## 76      NP_904338.1    NP_059332.1  24.171  211 145  6 226  433  105  303
## 77      NP_904338.1 XP_017210528.1  26.087   69  44  1 365  433  129  190
## 78      NP_904338.1 NP_001159387.1  26.087   69  44  1 365  433  142  203
## 79      NP_904338.1 XP_021330470.1  30.645   62  38  2 164  223  379  437
## 80      NP_904338.1    XP_689554.6  35.417   48  28  1 554  598 1107 1154
## 81      NP_904339.1    NP_059342.1  37.143  140  72  3   1  127    1  137
## 82      NP_904339.1 NP_001038688.1  29.412   85  54  3  33  112  306  389
## 83      NP_904340.1    NP_059343.1  73.810  378  99  0   1  378    1  378
## 84      NP_904340.1 XP_021322416.1  28.704  108  60  4 223  315  263  368
## 85      NP_904340.1 XP_021322415.1  28.704  108  60  4 223  315  263  368
## 86      NP_904340.1 XP_021322414.1  28.704  108  60  4 223  315  310  415
## 87      NP_904340.1 XP_021322413.1  28.704  108  60  4 223  315  310  415
## 88      NP_598866.1 XP_009294521.1  46.154  273 130  6   4  267  420  684
## 89      NP_598866.1 NP_001313634.1  46.154  273 130  6   4  267  476  740
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## 90      NP_598866.1 XP_009294513.1  46.154  273 130  6   4  267  475  739
## 91      NP_598866.1 NP_001186666.1  33.071  127  76  5   4  126  338  459
## 92      NP_598866.1 NP_001003517.1  30.400  125  82  4   4  126  344  465
## 93      NP_598866.1 NP_001003517.1  30.645   62  41  2  53  113   43  103
## 94      NP_598866.1    NP_956073.2  34.444   90  56  3  40  126  527  616
## 95      NP_598866.1    NP_956073.2  30.000   90  57  3  40  126  179  265
## 96      NP_598866.1    NP_956073.2  29.474   95  58  4  36  127   63  151
## 97      NP_598866.1    NP_998070.1  28.906  128  80  5   4  126  339  460
## 98      NP_598866.1    NP_998070.1  28.767   73  49  3  43  113   27   98
## 99      NP_598866.1    NP_998529.3  25.899  139  98  4  13  149  343  478
## 100     NP_598866.1    NP_998529.3  25.253   99  71  2  23  118   10  108
## 101     NP_598866.1 NP_001307463.1  23.438  128  93  4   2  127  371  495
## 102     NP_598866.1 NP_001307463.1  30.435   92  59  3  55  143   76  165
## 103     NP_598866.1 NP_001025330.1  27.097  155 103  7  17  170   12  157
## 104     NP_598866.1    XP_685017.4  24.528  106  75  4  37  140  388  490
## 105     NP_598866.1    NP_998181.1  23.894  113  80  3  42  152   88  196
## 106     NP_598866.1    NP_998181.1  28.571   77  52  3  40  113  221  297
## 107     NP_598866.1 XP_005162560.1  24.779  113  79  3  42  152  164  272
## 108     NP_598866.1 XP_005162560.1  28.571   77  52  3  40  113  297  373
## 109     NP_598866.1    NP_922915.2  27.848   79  46  3  40  117   40  108
## 110     NP_598866.1    NP_922915.2  26.829   82  55  2  37  113  162  243
## 111     NP_598866.1 NP_001107048.1  29.032   62  40  2  55  113  181  241
## 112     NP_598866.1 NP_001107048.1  24.211   95  66  3  37  127  408  500
## 113     NP_598866.1 NP_001107048.1  24.691   81  57  2  37  113  286  366
## 114     NP_598866.1 NP_001039026.1  27.174   92  58  5  51  138   32  118
## 115     NP_598866.1 NP_001092245.1  37.288   59  34  2  56  113  136  192
## 116     NP_598866.1    NP_991204.1  32.759   58  37  2  55  111   80  136
## 117     NP_598866.1 NP_001018393.2  26.000  100  63  6  43  138   28  120
## 118     NP_598866.1 NP_001019983.2  24.272  103  77  1 180  281  146  248
## 119     NP_598866.1 NP_001108605.1  24.719   89  62  4  40  127   40  124
## 120     NP_598866.1 XP_005157246.1  18.705  139 100  2 123  252   59  193
## 121     NP_598866.1 XP_021334745.1  27.536   69  49  1 194  261 1139 1207
## 122     NP_598866.1    NP_957186.1  22.727   88  62  2  32  113   26  113
## 123     NP_598866.1 XP_009293385.1  31.169   77  45  2 134  207 2379 2450
## 124     NP_598866.1 XP_009293389.1  31.169   77  45  2 134  207 2367 2438
## 125     NP_598866.1 XP_009293388.1  31.169   77  45  2 134  207 2414 2485
## 126     NP_598866.1 XP_009293386.1  31.169   77  45  2 134  207 2374 2445
## 127     NP_598866.1 NP_001121836.1  28.125   64  41  2  55  113   69  132
## 128     NP_598866.1 XP_009293384.1  31.169   77  45  2 134  207 2414 2485
## 129     NP_598866.1 XP_009293383.1  31.169   77  45  2 134  207 2414 2485
## 130     NP_598866.1 XP_021324431.1  31.169   77  45  2 134  207 2342 2413
## 131     NP_598866.1 XP_009293390.1  31.169   77  45  2 134  207 2342 2413
## 132     NP_598866.1 XP_001920501.5  24.286   70  53  0 190  259 1398 1467
## 133     NP_598866.1 XP_021334263.1  22.131  122  89  3  40  155   14  135
## 134     NP_598866.1 XP_021334262.1  22.131  122  89  3  40  155   14  135
## 135     NP_598866.1 NP_001082944.1  22.131  122  89  3  40  155   14  135
## 136     NP_598866.1 XP_021334265.1  22.131  122  89  3  40  155   14  135
## 137     NP_598866.1 XP_021334264.1  22.131  122  89  3  40  155   14  135
## 138     NP_598866.1 XP_021334746.1  27.692   65  46  1 198  261  952 1016
## 139     NP_598866.1 XP_003199098.1  26.471  102  65  2 173  274  279  370
## 140     NP_598866.1 XP_005173719.1  24.409  127  81  3 121  232  119  245
## 141     NP_598866.1 XP_009294942.1  48.148   27  14  0 236  262  255  281
## 142     NP_598866.1 XP_021325513.1  48.148   27  14  0 236  262  255  281
## 143     NP_776134.1 NP_001038578.1  25.635  394 256 12   1  367   50  433
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## 144     NP_776134.1    XP_698357.3  35.433  127  82  0 241  367  383  509
## 145     NP_776134.1 XP_021325116.1  31.667  120  79  2 231  347  414  533
## 146     NP_776134.1 XP_005174054.1  32.075  106  69  2 243  345 2113 2218
## 147     NP_776134.1 XP_009295448.1  32.787  122  78  3 219  336 1031 1152
## 148     NP_776134.1 XP_009295447.1  32.787  122  78  3 219  336 1089 1210
## 149     NP_776134.1 XP_009295444.1  32.787  122  78  3 219  336 1263 1384
## 150     NP_776134.1 XP_009295444.1  28.141  199 113  9 172  345  910 1103
## 151     NP_776134.1 XP_005157868.1  27.619  105  74  1 243  345  857  961
## 152     NP_776134.1 XP_021325358.1  30.612   98  65  2 243  337 2023 2120
## 153     NP_776134.1 XP_021325358.1  31.395   86  54  2 270  354 1140 1221
## 154     NP_776134.1 XP_021325122.1  29.730  111  75  2 230  337  174  284
## 155     NP_776134.1 XP_021325121.1  29.730  111  75  2 230  337  216  326
## 156     NP_776134.1 XP_021325120.1  29.730  111  75  2 230  337  275  385
## 157     NP_776134.1 XP_021330982.1  31.933  119  75  4 219  335  882  996
## 158     NP_776134.1 XP_009290119.1  30.303   99  66  2 243  338   98  196
## 159     NP_776134.1 XP_009290118.1  30.303   99  66  2 243  338  350  448
## 160     NP_776134.1 XP_005157836.1  30.303   99  66  2 243  338  189  287
## 161     NP_776134.1    XP_690098.5  26.984  126  84  3 223  345  899 1019
## 162     NP_776134.1 XP_005160238.1  27.559  127  86  3 217  337  782  908
## 163     NP_776134.1 XP_021333113.1  27.559  127  86  3 217  337  665  791
## 164     NP_776134.1 XP_017206561.2  33.333   81  53  1 267  346  681  761
## 165     NP_776134.1 XP_021333111.1  27.559  127  86  3 217  337  723  849
## 166     NP_776134.1 XP_001921257.4  30.303   99  66  2 243  338  345  443
## 167     NP_776134.1 XP_009290117.1  30.303   99  66  2 243  338  350  448
## 168     NP_776134.1 XP_021325237.1  29.358  109  74  2 232  337 1049 1157
## 169     NP_776134.1 XP_009295766.1  26.991  226 137  9 124  338  337  545
## 170     NP_776134.1 XP_021325107.1  25.926  135  89  4 221  345 1488 1621
## 171     NP_776134.1 XP_021325109.1  25.926  135  89  4 221  345 1486 1619
## 172     NP_776134.1 XP_021325106.1  25.926  135  89  4 221  345 2006 2139
## 173     NP_776134.1 XP_021325105.1  25.926  135  89  4 221  345 2121 2254
## 174     NP_776134.1 XP_021325110.1  25.926  135  89  4 221  345 1430 1563
## 175     NP_776134.1 XP_017208755.1  25.926  135  89  4 221  345 2183 2316
## 176     NP_776134.1 XP_021325103.1  25.926  135  89  4 221  345 2236 2369
## 177     NP_776134.1 XP_021322154.1  32.283  127  74  6 219  338  967 1088
## 178     NP_776134.1 XP_009290195.1  32.283  127  74  6 219  338  967 1088
## 179     NP_776134.1    XP_698776.5  32.283  127  74  6 219  338  967 1088
## 180     NP_776134.1 XP_021325097.1  25.926  135  89  4 221  345 2409 2542
## 181     NP_776134.1 XP_021325100.1  25.926  135  89  4 221  345 2351 2484
## 182     NP_776134.1 XP_021325108.1  25.926  135  89  4 221  345 1486 1619
## 183     NP_776134.1 XP_021325101.1  25.926  135  89  4 221  345 2351 2484
## 184     NP_776134.1 XP_021325099.1  25.926  135  89  4 221  345 2354 2487
## 185     NP_776134.1 XP_021325098.1  25.926  135  89  4 221  345 2354 2487
## 186     NP_776134.1 XP_021325104.1  25.926  135  89  4 221  345 2236 2369
## 187     NP_776134.1 XP_021325096.1  25.926  135  89  4 221  345 2582 2715
## 188  NP_001348394.1 XP_021331254.1  42.523  214 123  0 153  366  116  329
## 189  NP_001348394.1 XP_021331254.1  41.589  214 125  0 153  366   60  273
## 190  NP_001348394.1 XP_021331254.1  41.395  215 126  0 153  367  200  414
## 191  NP_001348394.1 XP_021331254.1  41.589  214 125  0 153  366  172  385
## 192  NP_001348394.1 XP_021331254.1  41.121  214 126  0 153  366    4  217
## 193  NP_001348394.1 XP_021331254.1  42.857  189 108  0 178  366    1  189
## 194  NP_001348394.1 XP_021331254.1  40.187  214 128  0 153  366   32  245
## 195  NP_001348394.1 XP_021331254.1  41.589  214 125  0 153  366  144  357
## 196  NP_001348394.1 XP_021331254.1  40.722  194 115  0 153  346  228  421
## 197  NP_001348394.1 XP_021331048.1  43.458  214 121  0 153  366  266  479
```

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## 198  NP_001348394.1 XP_021331048.1  42.056  214 124  0 153  366  322  535
## 199  NP_001348394.1 XP_021331048.1  46.114  193 104  0 174  366    7  199
## 200  NP_001348394.1 XP_021331048.1  40.654  214 127  0 153  366  210  423
## 201  NP_001348394.1 XP_021331048.1  42.523  214 123  0 153  366   70  283
## 202  NP_001348394.1 XP_021331048.1  43.925  214 120  0 153  366  154  367
## 203  NP_001348394.1 XP_021331048.1  40.930  215 127  0 153  367  350  564
## 204  NP_001348394.1 XP_021331048.1  36.957  276 158  2  99  366   44  311
## 205  NP_001348394.1 XP_021331048.1  41.589  214 125  0 153  366   42  255
## 206  NP_001348394.1 XP_021331048.1  40.187  214 128  0 153  366  182  395
## 207  NP_001348394.1 XP_021331048.1  39.720  214 129  0 153  366  126  339
## 208  NP_001348394.1 XP_021331048.1  39.252  214 130  0 153  366  238  451
## 209  NP_001348394.1 XP_021331048.1  45.294  170  93  0 197  366    2  171
## 210  NP_001348394.1 XP_021331048.1  41.237  194 114  0 153  346  378  571
## 211  NP_001348394.1 XP_021331048.1  45.977   87  47  0 280  366    1   87
## 212  NP_001348394.1 XP_021330830.1  43.458  214 121  0 153  366   58  271
## 213  NP_001348394.1 XP_021330830.1  45.550  191 104  0 176  366   25  215
## 214  NP_001348394.1 XP_021330830.1  40.969  227 133  1 140  366   18  243
## 215  NP_001348394.1 XP_021330830.1  35.333  300 176  3  77  366    8  299
## 216  NP_001348394.1 XP_021330830.1  42.236  161  93  0 153  313  142  302
## 217  NP_001348394.1 XP_021326985.1  45.794  214 116  0 153  366  232  445
## 218  NP_001348394.1 XP_021326985.1  42.991  214 122  0 153  366  204  417
## 219  NP_001348394.1 XP_021326985.1  41.589  214 125  0 153  366  176  389
## 220  NP_001348394.1 XP_021326985.1  41.441  222 130  0 145  366  112  333
## 221  NP_001348394.1 XP_021326985.1  41.589  214 125  0 153  366  148  361
## 222  NP_001348394.1 XP_021326985.1  41.615  161  94  0 153  313  288  448
## 223  NP_001348394.1 XP_021326985.1  44.144  111  62  0 256  366  111  221
## 224  NP_001348394.1 XP_021330513.1  45.794  214 116  0 153  366  232  445
## 225  NP_001348394.1 XP_021330513.1  42.991  214 122  0 153  366  204  417
## 226  NP_001348394.1 XP_021330513.1  41.589  214 125  0 153  366  176  389
## 227  NP_001348394.1 XP_021330513.1  41.441  222 130  0 145  366  112  333
## 228  NP_001348394.1 XP_021330513.1  41.589  214 125  0 153  366  148  361
## 229  NP_001348394.1 XP_021330513.1  41.615  161  94  0 153  313  288  448
## 230  NP_001348394.1 XP_021330513.1  44.144  111  62  0 256  366  111  221
## 231  NP_001348394.1 XP_021331394.1  44.860  214 118  0 153  366    5  218
## 232  NP_001348394.1 XP_021331394.1  37.319  276 157  2  99  366    7  274
## 233  NP_001348394.1 XP_021331394.1  46.032  189 102  0 178  366    2  190
## 234  NP_001348394.1 XP_021331394.1  36.101  277 161  2  99  367   35  303
## 235  NP_001348394.1 XP_021331394.1  40.206  194 116  0 153  346  117  310
## 236  NP_001348394.1 XP_021331394.1  36.646  161 101  1 153  313  173  332
## 237  NP_001348394.1 XP_021331394.1  38.000   50  31  0 317  366    1   50
## 238  NP_001348394.1 XP_017211047.2  45.794  214 116  0 153  366  267  480
## 239  NP_001348394.1 XP_017211047.2  40.074  272 155  2  99  366  409  676
## 240  NP_001348394.1 XP_017211047.2  42.523  214 123  0 153  366  323  536
## 241  NP_001348394.1 XP_017211047.2  42.523  214 123  0 153  366  155  368
## 242  NP_001348394.1 XP_017211047.2  42.523  214 123  0 153  366  211  424
## 243  NP_001348394.1 XP_017211047.2  42.056  214 124  0 153  366  379  592
## 244  NP_001348394.1 XP_017211047.2  42.056  214 124  0 153  366  127  340
## 245  NP_001348394.1 XP_017211047.2  42.991  214 122  0 153  366   99  312
## 246  NP_001348394.1 XP_017211047.2  40.654  214 127  0 153  366  239  452
## 247  NP_001348394.1 XP_017211047.2  41.121  214 126  0 153  366  351  564
## 248  NP_001348394.1 XP_017211047.2  42.708  192 110  0 175  366    9  200
## 249  NP_001348394.1 XP_017211047.2  39.720  214 129  0 153  366   71  284
## 250  NP_001348394.1 XP_017211047.2  40.654  214 127  0 153  366   15  228
## 251  NP_001348394.1 XP_017211047.2  39.720  214 129  0 153  366   43  256
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## 252  NP_001348394.1 XP_017211047.2  35.938  256 148  2  99  346  437  684
## 253  NP_001348394.1 XP_017211047.2  42.690  171  98  0 196  366    2  172
## 254  NP_001348394.1 XP_017211047.2  41.525  118  69  0 253  370    3  120
## 255  NP_001348394.1 XP_021328514.1  44.651  215 119  0 152  366   98  312
## 256  NP_001348394.1 XP_021328514.1  41.589  214 125  0 153  366   71  284
## 257  NP_001348394.1 XP_021328514.1  45.596  193 105  0 174  366    8  200
## 258  NP_001348394.1 XP_021328514.1  42.523  214 123  0 153  366   43  256
## 259  NP_001348394.1 XP_021328514.1  42.523  214 123  0 153  366   15  228
## 260  NP_001348394.1 XP_021328514.1  41.589  214 125  0 153  366  211  424
## 261  NP_001348394.1 XP_021328514.1  42.523  214 123  0 153  366  155  368
## 262  NP_001348394.1 XP_021328514.1  47.059  170  90  0 197  366    3  172
## 263  NP_001348394.1 XP_021328514.1  34.783  276 164  2  99  366  129  396
## 264  NP_001348394.1 XP_021328514.1  42.632  190 109  0 153  342  267  456
## 265  NP_001348394.1 XP_021328514.1  45.455  165  90  0 153  317  295  459
## 266  NP_001348394.1 XP_021328514.1  48.252  143  74  0 224  366    2  144
## 267  NP_001348394.1 XP_021326559.1  44.186  215 120  0 152  366   32  246
## 268  NP_001348394.1 XP_021326559.1  36.594  276 159  2  99  366   63  330
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## 270  NP_001348394.1 XP_021326559.1  37.879  264 148  2  99  354  119  374
## 271  NP_001348394.1 XP_021326559.1  42.056  214 124  0 153  366  145  358
## 272  NP_001348394.1 XP_021326559.1  44.974  189 104  0 178  366    2  190
## 273  NP_001348394.1 XP_021326559.1  43.000  100  57  0 174  273  278  377
## 274  NP_001348394.1 XP_021326559.1  34.722   72  47  0 146  217  306  377
## 275  NP_001348394.1 XP_021326559.1  38.000   50  31  0 317  366    1   50
## 276  NP_001348394.1 XP_021328522.1  44.651  215 119  0 152  366   98  312
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## 278  NP_001348394.1 XP_021328522.1  36.594  276 159  2  99  366  129  396
## 279  NP_001348394.1 XP_021328522.1  42.056  214 124  0 153  366  239  452
## 280  NP_001348394.1 XP_021328522.1  45.596  193 105  0 174  366    8  200
## 281  NP_001348394.1 XP_021328522.1  41.589  214 125  0 153  366   71  284
## 282  NP_001348394.1 XP_021328522.1  42.523  214 123  0 153  366   43  256
## 283  NP_001348394.1 XP_021328522.1  42.523  214 123  0 153  366   15  228
## 284  NP_001348394.1 XP_021328522.1  47.059  170  90  0 197  366    3  172
## 285  NP_001348394.1 XP_021328522.1  44.211  190 106  0 153  342  267  456
## 286  NP_001348394.1 XP_021328522.1  47.273  165  87  0 153  317  295  459
## 287  NP_001348394.1 XP_021328522.1  48.252  143  74  0 224  366    2  144
## 288  NP_001348394.1 XP_021328508.1  44.651  215 119  0 152  366   98  312
## 289  NP_001348394.1 XP_021328508.1  42.056  214 124  0 153  366  211  424
## 290  NP_001348394.1 XP_021328508.1  42.523  214 123  0 153  366  267  480
## 291  NP_001348394.1 XP_021328508.1  41.589  214 125  0 153  366   71  284
## 292  NP_001348394.1 XP_021328508.1  45.596  193 105  0 174  366    8  200
## 293  NP_001348394.1 XP_021328508.1  42.523  214 123  0 153  366   43  256
## 294  NP_001348394.1 XP_021328508.1  42.523  214 123  0 153  366   15  228
## 295  NP_001348394.1 XP_021328508.1  42.523  214 123  0 153  366  155  368
## 296  NP_001348394.1 XP_021328508.1  41.121  214 126  0 153  366  239  452
## 297  NP_001348394.1 XP_021328508.1  35.870  276 161  2  99  366  129  396
## 298  NP_001348394.1 XP_021328508.1  47.059  170  90  0 197  366    3  172
## 299  NP_001348394.1 XP_021328508.1  43.158  190 108  0 153  342  295  484
## 300  NP_001348394.1 XP_021328508.1  46.061  165  89  0 153  317  323  487
## 301  NP_001348394.1 XP_021328508.1  48.252  143  74  0 224  366    2  144
## 302  NP_001348394.1 XP_021328503.1  44.651  215 119  0 152  366   98  312
## 303  NP_001348394.1 XP_021328503.1  42.523  214 123  0 153  366  211  424
## 304  NP_001348394.1 XP_021328503.1  42.991  214 122  0 153  366  267  480
## 305  NP_001348394.1 XP_021328503.1  41.589  214 125  0 153  366   71  284
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## 306  NP_001348394.1 XP_021328503.1  45.596  193 105  0 174  366    8  200
## 307  NP_001348394.1 XP_021328503.1  42.523  214 123  0 153  366   43  256
## 308  NP_001348394.1 XP_021328503.1  42.523  214 123  0 153  366   15  228
## 309  NP_001348394.1 XP_021328503.1  42.523  214 123  0 153  366  155  368
## 310  NP_001348394.1 XP_021328503.1  41.589  214 125  0 153  366  239  452
## 311  NP_001348394.1 XP_021328503.1  35.870  276 161  2  99  366  129  396
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## 318  NP_001348394.1 XP_021328513.1  41.589  214 125  0 153  366   71  284
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## 321  NP_001348394.1 XP_021328513.1  42.523  214 123  0 153  366   15  228
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## 324  NP_001348394.1 XP_021328513.1  35.870  276 161  2  99  366  129  396
## 325  NP_001348394.1 XP_021328513.1  47.059  170  90  0 197  366    3  172
## 326  NP_001348394.1 XP_021328513.1  40.654  214 126  1 153  366  239  451
## 327  NP_001348394.1 XP_021328513.1  43.684  190 106  1 153  342  295  483
## 328  NP_001348394.1 XP_021328513.1  46.667  165  87  1 153  317  323  486
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## 332  NP_001348394.1 XP_021330455.1  42.056  214 124  0 153  366   84  297
## 333  NP_001348394.1 XP_021330455.1  38.785  214 131  0 153  366  168  381
## 334  NP_001348394.1 XP_021330455.1  41.589  214 125  0 153  366  140  353
## 335  NP_001348394.1 XP_021330455.1  41.294  201 118  0 153  353  196  396
## 336  NP_001348394.1 XP_021330455.1  38.785  214 131  0 153  366  224  437
## 337  NP_001348394.1 XP_021330455.1  36.777  242 125  1 153  366  280  521
## 338  NP_001348394.1 XP_021330455.1  37.383  214 134  0 153  366  252  465
## 339  NP_001348394.1 XP_021330455.1  36.916  214 135  0 153  366  336  549
## 340  NP_001348394.1 XP_021330455.1  40.123  162  97  0 153  314  392  553
## 341  NP_001348394.1 XP_021330455.1  30.208  192 126  3  99  286  366  553
## 342  NP_001348394.1 XP_021330454.1  41.410  227 133  0 140  366   99  325
## 343  NP_001348394.1 XP_021330454.1  42.056  214 124  0 153  366   84  297
## 344  NP_001348394.1 XP_021330454.1  38.785  214 131  0 153  366  168  381
## 345  NP_001348394.1 XP_021330454.1  41.589  214 125  0 153  366  140  353
## 346  NP_001348394.1 XP_021330454.1  41.294  201 118  0 153  353  196  396
## 347  NP_001348394.1 XP_021330454.1  38.785  214 131  0 153  366  224  437
## 348  NP_001348394.1 XP_021330454.1  36.777  242 125  1 153  366  280  521
## 349  NP_001348394.1 XP_021330454.1  37.383  214 134  0 153  366  252  465
## 350  NP_001348394.1 XP_021330454.1  36.916  214 135  0 153  366  336  549
## 351  NP_001348394.1 XP_021330454.1  40.123  162  97  0 153  314  392  553
## 352  NP_001348394.1 XP_021330454.1  30.208  192 126  3  99  286  366  553
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## 360  NP_001348394.1 XP_017211133.2  44.393  214 119  0 153  366  182  395
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## 369  NP_001348394.1 XP_017211133.2  35.294   51  32  1 153  203  630  679
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## 373  NP_001348394.1 XP_021331033.1  38.889  270 163  1  99  366  102  371
## 374  NP_001348394.1 XP_021331033.1  42.991  214 122  0 153  366  186  399
## 375  NP_001348394.1 XP_021331033.1  42.453  212 122  0 153  364  298  509
## 376  NP_001348394.1 XP_021331033.1  37.500  280 157  3  99  368  328  599
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## 386  NP_001348394.1 XP_021331266.1  43.925  214 120  0 153  366 1902 2115
## 387  NP_001348394.1 XP_021331266.1  39.706  272 156  2  99  366  924 1191
## 388  NP_001348394.1 XP_021331266.1  43.519  216 122  0 153  368 1986 2201
## 389  NP_001348394.1 XP_021331266.1  39.273  275 161  2  99  370 1904 2175
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## 391  NP_001348394.1 XP_021331266.1  38.768  276 153  2  99  366 1876 2143
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## 398  NP_001348394.1 XP_021331266.1  43.925  214 120  0 153  366  726  939
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## 412  NP_001348394.1 XP_021331266.1  43.925  214 120  0 153  366  838 1051
## 413  NP_001348394.1 XP_021331266.1  43.458  214 121  0 153  366 1062 1275
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## 441  NP_001348394.1 XP_021331266.1  36.957  276 158  2  99  366  868 1135
## 442  NP_001348394.1 XP_021331266.1  41.121  214 126  0 153  366 1118 1331
## 443  NP_001348394.1 XP_021331266.1  41.860  215 125  0 153  367 1762 1976
## 444  NP_001348394.1 XP_021331266.1  42.056  214 124  0 153  366 2630 2843
## 445  NP_001348394.1 XP_021331266.1  35.870  276 161  2  99  366 2296 2563
## 446  NP_001348394.1 XP_021331266.1  41.589  214 125  0 153  366 2546 2759
## 447  NP_001348394.1 XP_021331266.1  40.187  214 128  0 153  366 2070 2283
## 448  NP_001348394.1 XP_021331266.1  34.333  300 188  3  69  366 1207 1499
## 449  NP_001348394.1 XP_021331266.1  36.594  276 159  2  99  366 2548 2815
## 450  NP_001348394.1 XP_021331266.1  43.005  193 110  0 174  366 2119 2311
## 451  NP_001348394.1 XP_021331266.1  37.269  271 164  2  99  366  224  491
## 452  NP_001348394.1 XP_021331266.1  38.356  219 135  0 148  366  133  351
## 453  NP_001348394.1 XP_021331266.1  39.720  214 129  0 153  366  306  519
## 454  NP_001348394.1 XP_021331266.1  38.785  214 131  0 153  366 2042 2255
## 455  NP_001348394.1 XP_021331266.1  41.667  192 112  0 175  366  216  407
## 456  NP_001348394.1 XP_021331266.1  40.930  215 127  0 153  367 2658 2872
## 457  NP_001348394.1 XP_021331266.1  35.656  244 153  1 127  366   52  295
## 458  NP_001348394.1 XP_021331266.1  39.896  193 116  0 174  366  131  323
## 459  NP_001348394.1 XP_021331266.1  43.558  163  92  0 153  315 2714 2876
## 460  NP_001348394.1 XP_021328500.1  44.651  215 119  0 152  366   98  312
## 461  NP_001348394.1 XP_021328500.1  43.925  214 120  0 153  366  323  536
## 462  NP_001348394.1 XP_021328500.1  42.056  214 124  0 153  366  211  424
## 463  NP_001348394.1 XP_021328500.1  45.596  193 105  0 174  366    8  200
## 464  NP_001348394.1 XP_021328500.1  41.589  214 125  0 153  366   71  284
## 465  NP_001348394.1 XP_021328500.1  42.991  214 122  0 153  366  295  508
## 466  NP_001348394.1 XP_021328500.1  42.523  214 123  0 153  366   43  256
## 467  NP_001348394.1 XP_021328500.1  42.056  214 124  0 153  366  267  480
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## 468  NP_001348394.1 XP_021328500.1  42.523  214 123  0 153  366   15  228
## 469  NP_001348394.1 XP_021328500.1  42.523  214 123  0 153  366  155  368
## 470  NP_001348394.1 XP_021328500.1  35.870  276 161  2  99  366  129  396
## 471  NP_001348394.1 XP_021328500.1  47.059  170  90  0 197  366    3  172
## 472  NP_001348394.1 XP_021328500.1  40.654  214 127  0 153  366  239  452
## 473  NP_001348394.1 XP_021328500.1  44.970  169  93  0 174  342  372  540
## 474  NP_001348394.1 XP_021328500.1  37.600  250 144  4  75  317  299  543
## 475  NP_001348394.1 XP_021328500.1  48.252  143  74  0 224  366    2  144
## 476  NP_001348394.1 XP_021328499.1  44.651  215 119  0 152  366   98  312
## 477  NP_001348394.1 XP_021328499.1  42.056  214 124  0 153  366  211  424
## 478  NP_001348394.1 XP_021328499.1  45.596  193 105  0 174  366    8  200
## 479  NP_001348394.1 XP_021328499.1  41.589  214 125  0 153  366   71  284
## 480  NP_001348394.1 XP_021328499.1  42.523  214 123  0 153  366   43  256
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## 484  NP_001348394.1 XP_021328499.1  43.069  202 115  0 153  354  267  468
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## 486  NP_001348394.1 XP_021328499.1  47.059  170  90  0 197  366    3  172
## 487  NP_001348394.1 XP_021328499.1  40.654  214 127  0 153  366  239  452
## 488  NP_001348394.1 XP_021328499.1  37.549  253 143  5  75  317  299  546
## 489  NP_001348394.1 XP_021328499.1  48.252  143  74  0 224  366    2  144
## 490  NP_001348394.1 XP_021328528.1  44.651  215 119  0 152  366  126  340
## 491  NP_001348394.1 XP_021328528.1  43.925  214 120  0 153  366   15  228
## 492  NP_001348394.1 XP_021328528.1  46.114  193 104  0 174  366    8  200
## 493  NP_001348394.1 XP_021328528.1  42.056  214 124  0 153  366  239  452
## 494  NP_001348394.1 XP_021328528.1  41.589  214 125  0 153  366   99  312
## 495  NP_001348394.1 XP_021328528.1  42.523  214 123  0 153  366   71  284
## 496  NP_001348394.1 XP_021328528.1  42.523  214 123  0 153  366   43  256
## 497  NP_001348394.1 XP_021328528.1  42.523  214 123  0 153  366  183  396
## 498  NP_001348394.1 XP_021328528.1  41.589  214 125  0 153  366  295  508
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## 500  NP_001348394.1 XP_021328528.1  35.870  276 161  2  99  366  157  424
## 501  NP_001348394.1 XP_021328528.1  41.589  214 125  0 153  366  323  536
## 502  NP_001348394.1 XP_021328528.1  48.235  170  88  0 197  366    3  172
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## 504  NP_001348394.1 XP_021328528.1  37.200  250 145  4  75  317  327  571
## 505  NP_001348394.1 XP_021328528.1  44.828   87  48  0 280  366    2   88
## 506  NP_001348394.1 XP_021331018.1  46.114  193 104  0 174  366  198  390
## 507  NP_001348394.1 XP_021331018.1  42.991  214 122  0 153  366  205  418
## 508  NP_001348394.1 XP_021331018.1  41.026  234 133  1 138  366  129  362
## 509  NP_001348394.1 XP_021331018.1  43.684  190 107  0 153  342  233  422
## 510  NP_001348394.1 XP_021331018.1  37.255   51  32  0 153  203  373  423
## 511  NP_001348394.1 XP_021331293.1  43.925  214 120  0 153  366   99  312
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## 513  NP_001348394.1 XP_021331293.1  42.523  214 123  0 153  366   43  256
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## 515  NP_001348394.1 XP_021331293.1  42.056  214 124  0 153  366   15  228
## 516  NP_001348394.1 XP_021331293.1  40.654  214 127  0 153  366   71  284
## 517  NP_001348394.1 XP_021331293.1  46.471  170  91  0 197  366    3  172
## 518  NP_001348394.1 XP_021331293.1  41.791  201 117  0 153  353  211  411
## 519  NP_001348394.1 XP_021331293.1  44.828   87  48  0 280  366    2   88
## 520  NP_001348394.1 XP_009299203.2  42.982  228 129  1 140  366  207  434
## 521  NP_001348394.1 XP_009299203.2  43.925  214 120  0 153  366  249  462
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## 522  NP_001348394.1 XP_009299203.2  41.322  242 137  1 125  366  282  518
## 523  NP_001348394.1 XP_009299203.2  42.523  214 123  0 153  366  165  378
## 524  NP_001348394.1 XP_009299203.2  42.358  229 131  1 141  368  264  492
## 525  NP_001348394.1 XP_009299203.2  37.594  266 150  3 109  366  149  406
## 526  NP_001348394.1 XP_009299203.2  42.056  214 124  0 153  366  109  322
## 527  NP_001348394.1 XP_009299203.2  37.549  253 148  2  99  346  279  526
## 528  NP_001348394.1 XP_009299203.2  40.415  193 115  0 174  366  102  294
## 529  NP_001348394.1 XP_009299203.2  42.697  178 102  0 191  368   91  268
## 530  NP_001348394.1 XP_009299203.2  46.154  156  84  0 211  366   83  238
## 531  NP_001348394.1 XP_009299203.2  42.308  130  75  0 239  368   83  212
## 532  NP_001348394.1 XP_021331294.1  43.925  214 120  0 153  366   99  312
## 533  NP_001348394.1 XP_021331294.1  38.043  276 155  2  99  366  129  396
## 534  NP_001348394.1 XP_021331294.1  42.523  214 123  0 153  366   43  256
## 535  NP_001348394.1 XP_021331294.1  44.560  193 107  0 174  366    8  200
## 536  NP_001348394.1 XP_021331294.1  42.056  214 124  0 153  366   15  228
## 537  NP_001348394.1 XP_021331294.1  40.654  214 127  0 153  366   71  284
## 538  NP_001348394.1 XP_021331294.1  42.857  203 116  0 153  355  211  413
## 539  NP_001348394.1 XP_021331294.1  46.471  170  91  0 197  366    3  172
## 540  NP_001348394.1 XP_021331294.1  33.610  241 116  3  99  303  185  417
## 541  NP_001348394.1 XP_021331294.1  44.828   87  48  0 280  366    2   88
## 542  NP_001348394.1 XP_021327006.1  42.991  214 122  0 153  366   86  299
## 543  NP_001348394.1 XP_021327006.1  36.594  276 159  2  99  366  172  439
## 544  NP_001348394.1 XP_021327006.1  44.845  194 107  0 153  346  310  503
## 545  NP_001348394.1 XP_021327006.1  38.153  249 146  1 118  366  227  467
## 546  NP_001348394.1 XP_021327006.1  39.189  222 135  0 145  366   50  271
## 547  NP_001348394.1 XP_021327006.1  41.121  214 126  0 153  366  142  355
## 548  NP_001348394.1 XP_021327006.1  40.000  215 129  0 153  367  282  496
## 549  NP_001348394.1 XP_021327006.1  43.713  167  94  0 200  366   49  215
## 550  NP_001348394.1 XP_009299198.1  40.698  258 153  0 109  366  127  384
## 551  NP_001348394.1 XP_009299198.1  39.179  268 163  0  99  366  145  412
## 552  NP_001348394.1 XP_009299198.1  39.184  245 145  2 126  366   56  300
## 553  NP_001348394.1 XP_009299198.1  39.352  216 131  0 153  368  227  442
## 554  NP_001348394.1 XP_009299198.1  36.260  262 167  0 109  370  211  472
## 555  NP_001348394.1 XP_009299198.1  40.299  201 120  0 168  368   74  274
## 556  NP_001348394.1 XP_021331063.1  39.462  223 135  0 145  367    7  229
## 557  NP_001348394.1 XP_021331063.1  43.529  170  96  0 197  366    3  172
## 558  NP_001348394.1 XP_021331063.1  42.268  194 112  0 153  346   43  236
## 559  NP_001348394.1 XP_021331063.1  43.357  143  81  0 224  366    2  144
## 560  NP_001348394.1 XP_021331208.1  40.541  222 132  0 145  366    7  228
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## 562  NP_001348394.1 XP_021331208.1  43.925  214 120  0 153  366  155  368
## 563  NP_001348394.1 XP_021331208.1  38.406  276 154  2  99  366  157  424
## 564  NP_001348394.1 XP_021331208.1  38.406  276 154  2  99  366  185  452
## 565  NP_001348394.1 XP_021331208.1  42.523  214 123  0 153  366  127  340
## 566  NP_001348394.1 XP_021331208.1  42.056  214 124  0 153  366   71  284
## 567  NP_001348394.1 XP_021331208.1  42.523  214 123  0 153  366   99  312
## 568  NP_001348394.1 XP_021331208.1  43.455  191 108  0 153  343  267  457
## 569  NP_001348394.1 XP_021331208.1  43.529  170  96  0 197  366    3  172
## 570  NP_001348394.1 XP_021331208.1  43.678   87  49  0 280  366    2   88
## 571  NP_001348394.1 XP_021331433.1  44.393  214 119  0 153  366    5  218
## 572  NP_001348394.1 XP_021331433.1  42.009  219 127  0 153  371  145  363
## 573  NP_001348394.1 XP_021331433.1  36.232  276 160  2  99  366    7  274
## 574  NP_001348394.1 XP_021331433.1  45.789  190 103  0 177  366    1  190
## 575  NP_001348394.1 XP_021331433.1  41.589  214 125  0 153  366  173  386
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## 576  NP_001348394.1 XP_021331433.1  34.868  304 154  4  99  366   35  330
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## 578  NP_001348394.1 XP_021331277.1  44.144  222 124  0 145  366  113  334
## 579  NP_001348394.1 XP_021331277.1  35.052  291 188  1  77  367  102  391
## 580  NP_001348394.1 XP_021331277.1  44.059  202 107  1 173  368   79  280
## 581  NP_001348394.1 XP_021331277.1  39.070  215 131  0 153  367  205  419
## 582  NP_001348394.1 XP_021331277.1  36.527  167 106  0 148  314  256  422
## 583  NP_001348394.1 XP_021331277.1  33.333   51  34  0 153  203  373  423
## 584  NP_001348394.1 XP_021331031.1  42.523  214 123  0 153  366   41  254
## 585  NP_001348394.1 XP_021331031.1  43.455  191 108  0 176  366   36  226
## 586  NP_001348394.1 XP_021331031.1  41.237  194 114  0 153  346   69  262
## 587  NP_001348394.1 XP_021331392.1  44.393  214 119  0 153  366   99  312
## 588  NP_001348394.1 XP_021331392.1  36.949  295 169  3  77  366    2  284
## 589  NP_001348394.1 XP_021331392.1  42.081  221 128  0 146  366  148  368
## 590  NP_001348394.1 XP_021331392.1  43.056  216 123  0 153  368  127  342
## 591  NP_001348394.1 XP_021331392.1  43.827  162  91  0 153  314  211  372
## 592  NP_001348394.1 XP_021331323.1  43.182  220 124  1 153  371   74  293
## 593  NP_001348394.1 XP_021331323.1  40.654  214 127  0 153  366   18  231
## 594  NP_001348394.1 XP_021331323.1  43.005  193 110  0 174  366   11  203
## 595  NP_001348394.1 XP_021331323.1  40.654  214 127  0 153  366   46  259
## 596  NP_001348394.1 XP_021331323.1  42.775  173  99  0 194  366    3  175
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## 598  NP_001348394.1 XP_003198540.5  39.855  276 150  2  99  366  546  813
## 599  NP_001348394.1 XP_003198540.5  44.393  214 119  0 153  366  404  617
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## 601  NP_001348394.1 XP_003198540.5  47.959  196 102  0 171  366  198  393
## 602  NP_001348394.1 XP_003198540.5  42.795  229 130  1 138  366  194  421
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## 606  NP_001348394.1 XP_003198540.5  41.589  214 125  0 153  366  320  533
## 607  NP_001348394.1 XP_003198540.5  42.523  214 123  0 153  366  516  729
## 608  NP_001348394.1 XP_003198540.5  42.056  214 124  0 153  366  656  869
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## 612  NP_001348394.1 XP_003198540.5  36.594  276 159  2  99  366  434  701
## 613  NP_001348394.1 XP_003198540.5  40.796  201 119  0 153  353  684  884
## 614  NP_001348394.1 XP_003198540.5  43.820  178 100  0 152  329  711  888
## 615  NP_001348394.1 XP_003198540.5  33.721  258 155  3 113  366    8  253
## 616  NP_001348394.1 XP_021327018.1  44.393  214 119  0 153  366   60  273
## 617  NP_001348394.1 XP_021327018.1  42.791  215 123  0 153  367   88  302
## 618  NP_001348394.1 XP_021327018.1  43.005  193 110  0 174  366   53  245
## 619  NP_001348394.1 XP_021327018.1  41.589  214 125  0 153  366  116  329
## 620  NP_001348394.1 XP_021327018.1  44.706  170  94  0 197  366   48  217
## 621  NP_001348394.1 XP_021327018.1  34.343  297 157  4  99  362   90  381
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## 623  NP_001348394.1 XP_021329626.1  44.792  192 106  0 176  367   56  247
## 624  NP_001348394.1 XP_021329626.1  37.743  257 160  0 110  366   74  330
## 625  NP_001348394.1 XP_021329626.1  41.837  196 114  0 153  348  173  368
## 626  NP_001348394.1 XP_021329625.1  44.595  222 123  0 145  366   53  274
## 627  NP_001348394.1 XP_021329625.1  44.792  192 106  0 176  367   56  247
## 628  NP_001348394.1 XP_021329625.1  37.743  257 160  0 110  366   74  330
## 629  NP_001348394.1 XP_021329625.1  41.837  196 114  0 153  348  173  368
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## 630  NP_001348394.1 XP_021329624.1  44.595  222 123  0 145  366   53  274
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## 632  NP_001348394.1 XP_021329624.1  37.743  257 160  0 110  366   74  330
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## 634  NP_001348394.1 XP_021329623.1  44.595  222 123  0 145  366   53  274
## 635  NP_001348394.1 XP_021329623.1  44.792  192 106  0 176  367   56  247
## 636  NP_001348394.1 XP_021329623.1  37.743  257 160  0 110  366   74  330
## 637  NP_001348394.1 XP_021329623.1  41.837  196 114  0 153  348  173  368
## 638  NP_001348394.1 XP_021331264.1  43.458  214 121  0 153  366   78  291
## 639  NP_001348394.1 XP_021331264.1  42.056  214 124  0 153  366   50  263
## 640  NP_001348394.1 XP_021331264.1  40.187  214 128  0 153  366   22  235
## 641  NP_001348394.1 XP_021331264.1  44.041  193 108  0 174  366   15  207
## 642  NP_001348394.1 XP_021331264.1  43.820  178 100  0 189  366    2  179
## 643  NP_001348394.1 XP_021331264.1  39.896  193 116  0 153  345  106  298
## 644  NP_001348394.1 XP_021331264.1  44.715  123  68  0 244  366    1  123
## 645  NP_001348394.1 XP_021331206.1  40.541  222 132  0 145  366    7  228
## 646  NP_001348394.1 XP_021331206.1  44.393  214 119  0 153  366   43  256
## 647  NP_001348394.1 XP_021331206.1  43.925  214 120  0 153  366  155  368
## 648  NP_001348394.1 XP_021331206.1  43.458  214 121  0 153  366  183  396
## 649  NP_001348394.1 XP_021331206.1  42.523  214 123  0 153  366  127  340
## 650  NP_001348394.1 XP_021331206.1  37.681  276 156  2  99  366  157  424
## 651  NP_001348394.1 XP_021331206.1  41.589  214 125  0 153  366   71  284
## 652  NP_001348394.1 XP_021331206.1  41.589  214 125  0 153  366   99  312
## 653  NP_001348394.1 XP_021331206.1  36.957  276 158  2  99  366  185  452
## 654  NP_001348394.1 XP_021331206.1  42.056  214 124  0 153  366  267  480
## 655  NP_001348394.1 XP_021331206.1  43.529  170  96  0 197  366    3  172
## 656  NP_001348394.1 XP_021331206.1  41.361  191 112  0 153  343  295  485
## 657  NP_001348394.1 XP_021331206.1  43.678   87  49  0 280  366    2   88
## 658  NP_001348394.1 XP_017210929.2  45.596  193 105  0 174  366   41  233
## 659  NP_001348394.1 XP_017210929.2  43.458  214 121  0 153  366   48  261
## 660  NP_001348394.1 XP_017210929.2  42.056  214 124  0 153  366   76  289
## 661  NP_001348394.1 XP_017210929.2  39.130  253 144  2  99  346   50  297
## 662  NP_001348394.1 XP_017210929.2  43.299  194 110  0 173  366   12  205
## 663  NP_001348394.1 XP_017210929.2  44.633  177  98  0 190  366    1  177
## 664  NP_001348394.1 XP_017210929.2  40.690  145  86  0 153  297  160  304
## 665  NP_001348394.1 XP_017210929.2  36.975  119  75  0 153  271  188  306
## 666  NP_001348394.1 XP_021330537.1  45.327  214 117  0 153  366   61  274
## 667  NP_001348394.1 XP_021330537.1  44.503  191 106  0 176  366   56  246
## 668  NP_001348394.1 XP_021330537.1  38.132  257 159  0 110  366   74  330
## 669  NP_001348394.1 XP_021330537.1  41.753  194 113  0 153  346  173  366
## 670  NP_001348394.1 XP_021330537.1  45.455  165  90  0 202  366   54  218
## 671  NP_001348394.1 XP_021331375.1  44.186  215 120  0 152  366   98  312
## 672  NP_001348394.1 XP_021331375.1  39.493  276 151  2  99  366  269  536
## 673  NP_001348394.1 XP_021331375.1  42.991  214 122  0 153  366   43  256
## 674  NP_001348394.1 XP_021331375.1  37.319  276 157  2  99  366  101  368
## 675  NP_001348394.1 XP_021331375.1  42.523  214 123  0 153  366  239  452
## 676  NP_001348394.1 XP_021331375.1  45.596  193 105  0 174  366    8  200
## 677  NP_001348394.1 XP_021331375.1  42.991  214 122  0 153  366   15  228
## 678  NP_001348394.1 XP_021331375.1  35.870  276 161  2  99  366  129  396
## 679  NP_001348394.1 XP_021331375.1  41.121  214 126  0 153  366   71  284
## 680  NP_001348394.1 XP_021331375.1  40.654  214 127  0 153  366  211  424
## 681  NP_001348394.1 XP_021331375.1  46.471  170  91  0 197  366    3  172
## 682  NP_001348394.1 XP_021331375.1  49.645  141  71  0 224  364    2  142
## 683  NP_001348394.1 XP_021331375.1  46.957  115  61  0 252  366    2  116
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## 684  NP_001348394.1 XP_021331419.1  39.925  268 161  0  99  366   85  352
## 685  NP_001348394.1 XP_021331419.1  42.523  214 123  0 153  366   83  296
## 686  NP_001348394.1 XP_021331419.1  41.860  215 125  0 153  367  195  409
## 687  NP_001348394.1 XP_021331419.1  41.589  214 125  0 153  366   55  268
## 688  NP_001348394.1 XP_021331419.1  36.502  263 151  2  99  353  169  423
## 689  NP_001348394.1 XP_021331419.1  40.314  191 114  0 176  366   50  240
## 690  NP_001348394.1 XP_021331419.1  39.130  138  84  0 229  366   47  184
## 691  NP_001348394.1 XP_021330828.1  44.186  215 120  0 152  366  209  423
## 692  NP_001348394.1 XP_021330828.1  44.860  214 118  0 153  366  434  647
## 693  NP_001348394.1 XP_021330828.1  44.393  214 119  0 153  366   98  311
## 694  NP_001348394.1 XP_021330828.1  44.444  216 120  0 151  366   68  283
## 695  NP_001348394.1 XP_021330828.1  43.458  214 121  0 153  366  406  619
## 696  NP_001348394.1 XP_021330828.1  42.523  214 123  0 153  366  266  479
## 697  NP_001348394.1 XP_021330828.1  43.458  214 121  0 153  366  154  367
## 698  NP_001348394.1 XP_021330828.1  41.589  214 125  0 153  366  182  395
## 699  NP_001348394.1 XP_021330828.1  43.458  214 121  0 153  366  126  339
## 700  NP_001348394.1 XP_021330828.1  42.056  214 124  0 153  366  490  703
## 701  NP_001348394.1 XP_021330828.1  43.925  214 120  0 153  366  378  591
## 702  NP_001348394.1 XP_021330828.1  42.056  214 124  0 153  366  322  535
## 703  NP_001348394.1 XP_021330828.1  42.991  214 122  0 153  366  462  675
## 704  NP_001348394.1 XP_021330828.1  40.187  214 128  0 153  366  294  507
## 705  NP_001348394.1 XP_021330828.1  41.667  192 112  0 153  344  518  709
## 706  NP_001348394.1 XP_021330828.1  44.848  165  91  0 152  316  545  709
## 707  NP_001348394.1 XP_021330829.1  42.991  214 122  0 153  366   24  237
## 708  NP_001348394.1 XP_021330829.1  41.885  191 111  0 176  366   19  209
## 709  NP_001348394.1 XP_021330829.1  41.579  190 111  0 153  342   80  269
## 710  NP_001348394.1 XP_021330829.1  38.117  223 128  3  99  316   54  271
## 711  NP_001348394.1 XP_021330829.1  42.975  121  69  0 248  368    7  127
## 712  NP_001348394.1 XP_017211221.1  41.633  245 139  2 126  366   56  300
## 713  NP_001348394.1 XP_017211221.1  46.597  191 102  0 176  366  138  328
## 714  NP_001348394.1 XP_017211221.1  39.352  216 131  0 153  368  143  358
## 715  NP_001348394.1 XP_017211221.1  36.466  266 161  2 109  370  127  388
## 716  NP_001348394.1 XP_017211221.1  43.119  109  62  0 260  368   82  190
## 717  NP_001348394.1 XP_021330855.1  42.056  214 124  0 153  366  161  374
## 718  NP_001348394.1 XP_021330855.1  41.704  223 130  0 146  368  182  404
## 719  NP_001348394.1 XP_021330855.1  42.523  214 123  0 153  366  105  318
## 720  NP_001348394.1 XP_021330855.1  40.724  221 131  0 146  366  126  346
## 721  NP_001348394.1 XP_021330855.1  41.589  214 125  0 153  366   49  262
## 722  NP_001348394.1 XP_021330855.1  36.594  276 159  3  99  366   23  290
## 723  NP_001348394.1 XP_021330855.1  40.000  225 135  0 142  366   10  234
## 724  NP_001348394.1 XP_021330855.1  40.654  214 127  0 153  366  217  430
## 725  NP_001348394.1 XP_021330855.1  39.086  197 120  0 146  342  238  434
## 726  NP_001348394.1 XP_021330855.1  42.331  163  94  0 153  315  273  435
## 727  NP_001348394.1 XP_017208652.1  42.009  219 127  0 153  371  280  498
## 728  NP_001348394.1 XP_017208652.1  39.070  215 131  0 152  366  195  409
## 729  NP_001348394.1 XP_017208652.1  39.904  208 125  0 159  366  146  353
## 730  NP_001348394.1 XP_017208652.1  38.889  234 123  1 153  366   92  325
## 731  NP_001348394.1 XP_017208652.1  38.140  215 133  0 152  366  167  381
## 732  NP_001348394.1 XP_017208652.1  39.535  215 130  0 152  366  223  437
## 733  NP_001348394.1 XP_017208652.1  34.404  218  95  1 199  368   82  299
## 734  NP_001348394.1 NP_001103332.1  42.291  227 130  1 140  366   48  273
## 735  NP_001348394.1 NP_001103332.1  43.316  187 106  0 153  339  116  302
## 736  NP_001348394.1 XP_021331368.1  38.849  278 154  3  99  368  113  382
## 737  NP_001348394.1 XP_021331368.1  42.056  214 124  0 153  366   27  240
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## 738  NP_001348394.1 XP_021331368.1  42.056  214 124  0 153  366   83  296
## 739  NP_001348394.1 XP_021331368.1  42.523  214 123  0 153  366   55  268
## 740  NP_001348394.1 XP_021331368.1  41.038  212 125  0 155  366    1  212
## 741  NP_001348394.1 XP_021331368.1  35.870  276 161  2  99  366  141  408
## 742  NP_001348394.1 XP_021331368.1  40.491  163  97  0 153  315  251  413
## 743  NP_001348394.1 XP_021331015.1  45.026  191 105  0 176  366    1  191
## 744  NP_001348394.1 XP_021331015.1  44.271  192 107  0 153  344    6  197
## 745  NP_001348394.1 XP_009298771.1  43.439  221 125  0 148  368   82  302
## 746  NP_001348394.1 XP_009298771.1  45.550  191 104  0 176  366  138  328
## 747  NP_001348394.1 XP_009298771.1  36.122  263 160  2 109  367  127  385
## 748  NP_001348394.1 XP_009298771.1  37.963  216 134  0 153  368  143  358
## 749  NP_001348394.1 XP_009298771.1  35.928  167 107  0 148  314  222  388
## 750  NP_001348394.1 XP_017209999.1  42.991  214 122  0 153  366   71  284
## 751  NP_001348394.1 XP_017209999.1  45.550  191 104  0 176  366   66  256
## 752  NP_001348394.1 XP_017209999.1  42.523  214 123  0 153  366   99  312
## 753  NP_001348394.1 XP_017209999.1  43.256  215 122  0 153  367  127  341
## 754  NP_001348394.1 XP_017211176.1  43.458  214 121  0 153  366   70  283
## 755  NP_001348394.1 XP_017211176.1  43.636  220 118  1 153  366  126  345
## 756  NP_001348394.1 XP_017211176.1  42.408  191 110  0 176  366   65  255
## 757  NP_001348394.1 XP_017211176.1  41.624  197 109  1 153  343  154  350
## 758  NP_001348394.1 XP_021331369.1  37.681  276 156  2  99  366   63  330
## 759  NP_001348394.1 XP_021331369.1  40.654  214 127  0 153  366    5  218
## 760  NP_001348394.1 XP_021331369.1  41.850  227 131  1 141  366   48  274
## 761  NP_001348394.1 XP_021331369.1  41.589  214 125  0 153  366  145  358
## 762  NP_001348394.1 XP_021331369.1  44.737  190 105  0 177  366    1  190
## 763  NP_001348394.1 XP_021331369.1  42.500  160  92  0 153  312  201  360
## 764  NP_001348394.1 XP_021331369.1  32.692   52  35  0 317  368    1   52
## 765  NP_001348394.1 XP_021331369.1  26.606  109  70  2  99  202  259  362
## 766  NP_001348394.1 XP_021327009.1  43.458  214 120  1 153  366   61  273
## 767  NP_001348394.1 XP_021327009.1  42.130  216 124  1 153  368   89  303
## 768  NP_001348394.1 XP_021327009.1  39.726  219 132  0 148  366  111  329
## 769  NP_001348394.1 XP_021327009.1  45.775  142  76  1 229  370   53  193
## 770  NP_001348394.1 XP_021327009.1  33.790  219 135  2  99  312  118  331
## 771  NP_001348394.1 XP_021327008.1  43.458  214 120  1 153  366   61  273
## 772  NP_001348394.1 XP_021327008.1  42.130  216 124  1 153  368   89  303
## 773  NP_001348394.1 XP_021327008.1  39.726  219 132  0 148  366  111  329
## 774  NP_001348394.1 XP_021327008.1  45.775  142  76  1 229  370   53  193
## 775  NP_001348394.1 XP_021327008.1  33.790  219 135  2  99  312  118  331
## 776  NP_001348394.1 XP_021327007.1  43.458  214 120  1 153  366   61  273
## 777  NP_001348394.1 XP_021327007.1  42.130  216 124  1 153  368   89  303
## 778  NP_001348394.1 XP_021327007.1  39.726  219 132  0 148  366  111  329
## 779  NP_001348394.1 XP_021327007.1  45.775  142  76  1 229  370   53  193
## 780  NP_001348394.1 XP_021327007.1  33.790  219 135  2  99  312  118  331
## 781  NP_001348394.1 XP_021331332.1  45.327  214 117  0 153  366  603  816
## 782  NP_001348394.1 XP_021331332.1  36.594  276 159  2  99  366  661  928
## 783  NP_001348394.1 XP_021331332.1  35.354  297 180  3  77  366  609  900
## 784  NP_001348394.1 XP_021331332.1  39.033  269 162  2  99  366   45  312
## 785  NP_001348394.1 XP_021331332.1  42.523  214 123  0 153  366  267  480
## 786  NP_001348394.1 XP_021331332.1  42.056  214 124  0 153  366  743  956
## 787  NP_001348394.1 XP_021331332.1  42.523  214 123  0 153  366  883 1096
## 788  NP_001348394.1 XP_021331332.1  42.731  227 130  0 140  366    2  228
## 789  NP_001348394.1 XP_021331332.1  42.056  214 124  0 153  366  547  760
## 790  NP_001348394.1 XP_021331332.1  42.523  214 123  0 153  366  239  452
## 791  NP_001348394.1 XP_021331332.1  42.056  214 124  0 153  366  295  508
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## 792  NP_001348394.1 XP_021331332.1  35.811  296 162  2  99  366  129  424
## 793  NP_001348394.1 XP_021331332.1  40.991  222 131  0 145  366  567  788
## 794  NP_001348394.1 XP_021331332.1  40.090  222 132  1 145  366  903 1123
## 795  NP_001348394.1 XP_021331332.1  40.654  214 127  0 153  366  855 1068
## 796  NP_001348394.1 XP_021331332.1  35.145  276 163  2  99  366  773 1040
## 797  NP_001348394.1 XP_021331332.1  43.523  193 109  0 174  366  484  676
## 798  NP_001348394.1 XP_021331332.1  41.121  214 126  0 153  366  351  564
## 799  NP_001348394.1 XP_021331332.1  35.870  276 161  2  99  366  745 1012
## 800  NP_001348394.1 XP_021331332.1  35.145  276 163  2  99  366  717  984
## 801  NP_001348394.1 XP_021331332.1  36.594  276 159  2  99  366  269  536
## 802  NP_001348394.1 XP_021331332.1  40.187  214 128  0 153  366  379  592
## 803  NP_001348394.1 XP_021331332.1  35.507  276 162  2  99  366  437  704
## 804  NP_001348394.1 XP_021331332.1  40.187  214 128  0 153  366  519  732
## 805  NP_001348394.1 XP_021331332.1  34.130  293 176  3  77  364  338  618
## 806  NP_001348394.1 XP_021331332.1  38.785  214 131  0 153  366  435  648
## 807  NP_001348394.1 XP_021331332.1  42.784  194 110  1 153  346 1079 1271
## 808  NP_001348394.1 XP_021331332.1  33.779  299 163  3  99  366  969 1263
## 809  NP_001348394.1 XP_021331332.1  43.023  172  98  0 197  368    3  174
## 810  NP_001348394.1 XP_021331332.1  42.424   33  19  0 336  368    2   34
## 811  NP_001348394.1 XP_017211134.1  41.150  226 133  0 141  366   59  284
## 812  NP_001348394.1 XP_017211134.1  42.523  214 123  0 153  366   99  312
## 813  NP_001348394.1 XP_017211134.1  42.523  214 123  0 153  366  155  368
## 814  NP_001348394.1 XP_017211134.1  36.957  276 158  3  99  366   73  340
## 815  NP_001348394.1 XP_017211134.1  40.838  191 113  0 153  343  183  373
## 816  NP_001348394.1 XP_021330854.1  38.043  276 155  3  99  366   26  293
## 817  NP_001348394.1 XP_021330854.1  41.121  214 126  0 153  366   24  237
## 818  NP_001348394.1 XP_021330854.1  40.187  214 128  0 153  366  136  349
## 819  NP_001348394.1 XP_021330854.1  41.294  201 118  0 153  353  164  364
## 820  NP_001348394.1 XP_021330854.1  43.005  193 110  0 174  366   17  209
## 821  NP_001348394.1 XP_021330854.1  43.503  177 100  0 194  370    9  185
## 822  NP_001348394.1 XP_021330854.1  36.719  128  81  0 153  280  248  375
## 823  NP_001348394.1 XP_021330854.1  41.176   34  20  0 333  366    8   41
## 824  NP_001348394.1 XP_017210822.1  41.463  246 140  2 127  368   57  302
## 825  NP_001348394.1 XP_017210822.1  45.026  191 105  0 176  366  138  328
## 826  NP_001348394.1 XP_017210822.1  35.741  263 161  2 109  367  127  385
## 827  NP_001348394.1 XP_017210822.1  35.329  167 108  0 148  314  222  388
## 828  NP_001348394.1 XP_021331366.1  44.860  214 118  0 153  366   87  300
## 829  NP_001348394.1 XP_021331366.1  42.130  216 125  0 153  368   59  274
## 830  NP_001348394.1 XP_021331366.1  42.523  214 123  0 153  366    3  216
## 831  NP_001348394.1 XP_021331366.1  40.271  221 132  0 146  366   24  244
## 832  NP_001348394.1 XP_021331366.1  40.930  215 126  1 153  366  143  357
## 833  NP_001348394.1 XP_021331366.1  36.434  258 135  1 140  368  158  415
## 834  NP_001348394.1 XP_021331366.1  43.478  161  91  0 208  368    2  162
## 835  NP_001348394.1 XP_021331366.1  42.593  162  92  1 153  313  255  416
## 836  NP_001348394.1 XP_021331366.1  37.209   86  54  0 144  229  331  416
## 837  NP_001348394.1 XP_021331202.1  44.393  214 119  0 153  366   71  284
## 838  NP_001348394.1 XP_021331202.1  42.523  214 123  0 153  366   43  256
## 839  NP_001348394.1 XP_021331202.1  38.406  276 154  2  99  366  129  396
## 840  NP_001348394.1 XP_021331202.1  40.541  222 132  0 145  366    7  228
## 841  NP_001348394.1 XP_021331202.1  43.458  214 121  0 153  366  211  424
## 842  NP_001348394.1 XP_021331202.1  37.681  276 156  2  99  366  185  452
## 843  NP_001348394.1 XP_021331202.1  42.056  214 124  0 153  366   99  312
## 844  NP_001348394.1 XP_021331202.1  41.589  214 125  0 153  366  127  340
## 845  NP_001348394.1 XP_021331202.1  36.957  276 158  2  99  366  213  480
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## 846  NP_001348394.1 XP_021331202.1  42.056  214 124  0 153  366  295  508
## 847  NP_001348394.1 XP_021331202.1  43.529  170  96  0 197  366    3  172
## 848  NP_001348394.1 XP_021331202.1  36.948  249 149  2  99  343  269  513
## 849  NP_001348394.1 XP_021331202.1  43.678   87  49  0 280  366    2   88
## 850  NP_001348394.1 XP_021330549.1  43.925  214 120  0 153  366   60  273
## 851  NP_001348394.1 XP_021330549.1  42.791  215 123  0 153  367   88  302
## 852  NP_001348394.1 XP_021330549.1  43.005  193 110  0 174  366   53  245
## 853  NP_001348394.1 XP_021330549.1  41.589  214 125  0 153  366  116  329
## 854  NP_001348394.1 XP_021330549.1  44.118  170  95  0 197  366   48  217
## 855  NP_001348394.1 XP_021330549.1  34.007  297 158  4  99  362   90  381
## 856  NP_001348394.1 XP_021330548.1  43.925  214 120  0 153  366   60  273
## 857  NP_001348394.1 XP_021330548.1  42.791  215 123  0 153  367   88  302
## 858  NP_001348394.1 XP_021330548.1  43.005  193 110  0 174  366   53  245
## 859  NP_001348394.1 XP_021330548.1  41.589  214 125  0 153  366  116  329
## 860  NP_001348394.1 XP_021330548.1  44.118  170  95  0 197  366   48  217
## 861  NP_001348394.1 XP_021330548.1  34.007  297 158  4  99  362   90  381
## 862  NP_001348394.1 XP_017210088.1  43.925  214 120  0 153  366   60  273
## 863  NP_001348394.1 XP_017210088.1  42.791  215 123  0 153  367   88  302
## 864  NP_001348394.1 XP_017210088.1  43.005  193 110  0 174  366   53  245
## 865  NP_001348394.1 XP_017210088.1  41.589  214 125  0 153  366  116  329
## 866  NP_001348394.1 XP_017210088.1  44.118  170  95  0 197  366   48  217
## 867  NP_001348394.1 XP_017210088.1  34.007  297 158  4  99  362   90  381
## 868  NP_001348394.1 XP_021330547.1  43.925  214 120  0 153  366   60  273
## 869  NP_001348394.1 XP_021330547.1  42.791  215 123  0 153  367   88  302
## 870  NP_001348394.1 XP_021330547.1  43.005  193 110  0 174  366   53  245
## 871  NP_001348394.1 XP_021330547.1  41.589  214 125  0 153  366  116  329
## 872  NP_001348394.1 XP_021330547.1  44.118  170  95  0 197  366   48  217
## 873  NP_001348394.1 XP_021330547.1  34.007  297 158  4  99  362   90  381
## 874  NP_001348394.1 XP_021330858.1  44.762  210 116  0 153  362  464  673
## 875  NP_001348394.1 XP_021330858.1  42.056  214 124  0 153  366  352  565
## 876  NP_001348394.1 XP_021330858.1  42.991  214 122  0 153  366  380  593
## 877  NP_001348394.1 XP_021330858.1  41.553  219 128  0 148  366  235  453
## 878  NP_001348394.1 XP_021330858.1  43.925  214 120  0 153  366  100  313
## 879  NP_001348394.1 XP_021330858.1  42.991  214 122  0 153  366  212  425
## 880  NP_001348394.1 XP_021330858.1  40.654  214 127  0 153  366  408  621
## 881  NP_001348394.1 XP_021330858.1  41.121  214 126  0 153  366  324  537
## 882  NP_001348394.1 XP_021330858.1  39.754  244 144  1 126  366   14  257
## 883  NP_001348394.1 XP_021330858.1  40.187  214 128  0 153  366  296  509
## 884  NP_001348394.1 XP_021330858.1  39.269  219 133  0 148  366  123  341
## 885  NP_001348394.1 XP_021330858.1  35.075  268 174  0  99  366  102  369
## 886  NP_001348394.1 XP_021330858.1  41.791  201 117  0 153  353  802 1002
## 887  NP_001348394.1 XP_021330858.1  42.188  192 111  0 175  366   94  285
## 888  NP_001348394.1 XP_021330858.1  40.741  216 128  0 153  368  774  989
## 889  NP_001348394.1 XP_021330858.1  38.326  227 139  1 140  366  734  959
## 890  NP_001348394.1 XP_021330858.1  40.933  193 114  0 176  368  741  933
## 891  NP_001348394.1 XP_021330858.1  40.314  191 114  0 153  343  830 1020
## 892  NP_001348394.1 XP_021330858.1  29.412  306 170  4  99  366  550  847
## 893  NP_001348394.1 XP_021330858.1  34.632  231 121  4 153  353  548  778
## 894  NP_001348394.1 XP_021330857.1  42.991  214 122  0 153  366   67  280
## 895  NP_001348394.1 XP_021330857.1  41.743  218 127  0 153  370   95  312
## 896  NP_001348394.1 XP_021330857.1  42.731  227 128  2 140  366   28  252
## 897  NP_001348394.1 XP_021331421.1  43.458  214 121  0 153  366   43  256
## 898  NP_001348394.1 XP_021331421.1  44.393  214 119  0 153  366  211  424
## 899  NP_001348394.1 XP_021331421.1  44.560  193 107  0 174  366    8  200
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## 900  NP_001348394.1 XP_021331421.1  34.228  298 173  3  77  366   58  340
## 901  NP_001348394.1 XP_021331421.1  42.523  214 123  0 153  366  183  396
## 902  NP_001348394.1 XP_021331421.1  41.589  214 125  0 153  366   15  228
## 903  NP_001348394.1 XP_021331421.1  42.991  214 122  0 153  366  155  368
## 904  NP_001348394.1 XP_021331421.1  42.784  194 111  0 153  346  239  432
## 905  NP_001348394.1 XP_021331421.1  44.706  170  94  0 197  366    3  172
## 906  NP_001348394.1 XP_021331421.1  46.154  143  77  0 224  366    2  144
## 907  NP_001348394.1 XP_021331199.1  45.116  215 118  0 152  366  238  452
## 908  NP_001348394.1 XP_021331199.1  44.860  214 118  0 153  366   99  312
## 909  NP_001348394.1 XP_021331199.1  43.925  214 120  0 153  366   43  256
## 910  NP_001348394.1 XP_021331199.1  45.327  214 117  0 153  366   71  284
## 911  NP_001348394.1 XP_021331199.1  43.458  214 121  0 153  366   15  228
## 912  NP_001348394.1 XP_021331199.1  42.991  214 122  0 153  366  295  508
## 913  NP_001348394.1 XP_021331199.1  42.991  214 122  0 153  366  183  396
## 914  NP_001348394.1 XP_021331199.1  42.523  214 123  0 153  366  407  620
## 915  NP_001348394.1 XP_021331199.1  41.589  214 125  0 153  366  211  424
## 916  NP_001348394.1 XP_021331199.1  45.596  193 105  0 174  366    8  200
## 917  NP_001348394.1 XP_021331199.1  38.745  271 160  2  99  366  101  368
## 918  NP_001348394.1 XP_021331199.1  36.957  276 158  2  99  366  269  536
## 919  NP_001348394.1 XP_021331199.1  38.043  276 155  2  99  366  437  704
## 920  NP_001348394.1 XP_021331199.1  37.319  276 155  4  99  366  717  982
## 921  NP_001348394.1 XP_021331199.1  41.121  214 126  0 153  366  351  564
## 922  NP_001348394.1 XP_021331199.1  35.117  299 192  2  68  366  659  955
## 923  NP_001348394.1 XP_021331199.1  40.654  214 127  0 153  366  379  592
## 924  NP_001348394.1 XP_021331199.1  38.589  241 121  1 153  366  826 1066
## 925  NP_001348394.1 XP_021331199.1  44.118  170  95  0 197  366    3  172
## 926  NP_001348394.1 XP_021331199.1  35.145  276 163  2  99  366  465  732
## 927  NP_001348394.1 XP_021331199.1  35.950  242 126  2 153  366  575  815
## 928  NP_001348394.1 XP_021331199.1  36.531  271 161  4  79  343  806 1071
## 929  NP_001348394.1 XP_021331199.1  44.828   87  48  0 280  366    2   88
## 930  NP_001348394.1 XP_017211078.1  43.836  219 123  0 148  366   80  298
## 931  NP_001348394.1 XP_017211078.1  43.590  195 110  0 174  368  162  356
## 932  NP_001348394.1 XP_017211078.1  44.279  201 112  0 153  353  113  313
## 933  NP_001348394.1 XP_017211078.1  38.393  224 137  1 148  371  164  386
## 934  NP_001348394.1 XP_017211078.1  43.976  166  93  0 203  368   79  244
## 935  NP_001348394.1 XP_017211078.1  32.558  215 145  0  99  313  171  385
## 936  NP_001348394.1 XP_021331276.1  39.552  268 162  0  99  366  171  438
## 937  NP_001348394.1 XP_021331276.1  37.954  303 173  4  69  366  230  522
## 938  NP_001348394.1 XP_021331276.1  41.525  236 137  1 134  368  233  468
## 939  NP_001348394.1 XP_021331276.1  38.060  268 166  0  99  366  311  578
## 940  NP_001348394.1 XP_021331276.1  42.466  219 126  0 148  366  136  354
## 941  NP_001348394.1 XP_021331276.1  40.183  219 131  0 148  366  444  662
## 942  NP_001348394.1 XP_021331276.1  40.541  222 132  0 145  366  581  802
## 943  NP_001348394.1 XP_021331276.1  43.379  219 124  0 148  366   80  298
## 944  NP_001348394.1 XP_021331276.1  43.781  201 113  0 153  353  393  593
## 945  NP_001348394.1 XP_021331276.1  40.654  214 127  0 153  366  505  718
## 946  NP_001348394.1 XP_021331276.1  40.187  214 128  0 153  366  561  774
## 947  NP_001348394.1 XP_021331276.1  40.654  214 127  0 153  366  533  746
## 948  NP_001348394.1 XP_021331276.1  35.907  259 166  0 108  366  432  690
## 949  NP_001348394.1 XP_021331276.1  38.785  214 131  0 153  366  421  634
## 950  NP_001348394.1 XP_021331276.1  42.268  194 112  0 173  366   77  270
## 951  NP_001348394.1 XP_021331276.1  43.373  166  94  0 203  368   79  244
## 952  NP_001348394.1 XP_021331276.1  42.767  159  91  0 153  311  645  803
## 953  NP_001348394.1 XP_021331276.1  42.647  136  78  0 148  283  668  803
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## 954  NP_001348394.1 XP_021331276.1  32.738  168  97  3  99  258  647  806
## 955  NP_001348394.1 XP_017211205.2  45.794  214 116  0 153  366  491  704
## 956  NP_001348394.1 XP_017211205.2  43.231  229 129  1 141  368  506  734
## 957  NP_001348394.1 XP_017211205.2  43.172  227 128  1 141  366  226  452
## 958  NP_001348394.1 XP_017211205.2  41.204  216 127  0 153  368  295  510
## 959  NP_001348394.1 XP_017211205.2  42.056  214 124  0 153  366  155  368
## 960  NP_001348394.1 XP_017211205.2  43.925  214 120  0 153  366  575  788
## 961  NP_001348394.1 XP_017211205.2  42.991  214 122  0 153  366  547  760
## 962  NP_001348394.1 XP_017211205.2  43.925  214 120  0 153  366  463  676
## 963  NP_001348394.1 XP_017211205.2  36.232  276 160  2  99  366  381  648
## 964  NP_001348394.1 XP_017211205.2  42.009  219 127  0 148  366  626  844
## 965  NP_001348394.1 XP_017211205.2  41.589  214 125  0 153  366  211  424
## 966  NP_001348394.1 XP_017211205.2  41.589  214 125  0 153  366  127  340
## 967  NP_001348394.1 XP_017211205.2  43.458  214 121  0 153  366  183  396
## 968  NP_001348394.1 XP_017211205.2  40.187  214 128  0 153  366  351  564
## 969  NP_001348394.1 XP_017211205.2  40.271  221 132  0 148  368  710  930
## 970  NP_001348394.1 XP_017211205.2  38.428  229 140  1 141  368  310  538
## 971  NP_001348394.1 XP_017211205.2  40.741  216 128  0 153  368   99  314
## 972  NP_001348394.1 XP_017211205.2  40.741  216 128  0 153  368  379  594
## 973  NP_001348394.1 XP_017211205.2  39.252  214 130  0 153  366  659  872
## 974  NP_001348394.1 XP_017211205.2  38.767  227 138  1 140  366   59  284
## 975  NP_001348394.1 XP_017211205.2  40.654  214 127  0 153  366  687  900
## 976  NP_001348394.1 XP_017211205.2  37.097  248 156  0  99  346  689  936
## 977  NP_001348394.1 XP_017211205.2  40.102  197 118  0 172  368   62  258
## 978  NP_001348394.1 XP_021331166.1  44.393  214 119  0 153  366  323  536
## 979  NP_001348394.1 XP_021331166.1  43.925  214 120  0 153  366   15  228
## 980  NP_001348394.1 XP_021331166.1  42.081  221 128  0 146  366   64  284
## 981  NP_001348394.1 XP_021331166.1  43.925  214 120  0 153  366  351  564
## 982  NP_001348394.1 XP_021331166.1  38.406  276 154  2  99  366  241  508
## 983  NP_001348394.1 XP_021331166.1  43.379  219 124  0 153  371  211  429
## 984  NP_001348394.1 XP_021331166.1  35.179  307 176  3  68  366  357  648
## 985  NP_001348394.1 XP_021331166.1  42.291  227 130  1 141  366  142  368
## 986  NP_001348394.1 XP_021331166.1  38.406  276 154  2  99  366  465  732
## 987  NP_001348394.1 XP_021331166.1  43.925  214 120  0 153  366  463  676
## 988  NP_001348394.1 XP_021331166.1  43.458  214 121  0 153  366   43  256
## 989  NP_001348394.1 XP_021331166.1  38.043  276 155  2  99  366  493  760
## 990  NP_001348394.1 XP_021331166.1  41.589  214 125  0 153  366   99  312
## 991  NP_001348394.1 XP_021331166.1  42.056  214 124  0 153  366  239  452
## 992  NP_001348394.1 XP_021331166.1  33.225  307 182  3  68  366   49  340
## 993  NP_001348394.1 XP_021331166.1  42.523  214 123  0 153  366  183  396
## 994  NP_001348394.1 XP_021331166.1  41.969  193 112  0 174  366    8  200
## 995  NP_001348394.1 XP_021331166.1  42.932  191 109  0 153  343  575  765
## 996  NP_001348394.1 XP_021331166.1  42.353  170  98  0 197  366    3  172
## 997  NP_001348394.1 XP_021331166.1  42.759  145  83  0 224  368    2  146
## 998  NP_001348394.1 XP_021326473.1  43.111  225 128  0 142  366    1  225
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## 1001 NP_001348394.1 XP_021326473.1  37.681  276 156  2  99  366  126  393
## 1002 NP_001348394.1 XP_021326473.1  39.207  227 138  0 140  366   27  253
## 1003 NP_001348394.1 XP_021326473.1  42.523  214 123  0 153  366   68  281
## 1004 NP_001348394.1 XP_021326473.1  41.589  214 125  0 153  366  208  421
## 1005 NP_001348394.1 XP_021326473.1  41.589  214 125  0 153  366  236  449
## 1006 NP_001348394.1 XP_021326473.1  41.361  191 112  0 153  343  264  454
## 1007 NP_001348394.1 XP_021331395.1  42.991  214 122  0 153  366    2  215
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## 1008 NP_001348394.1 XP_021331395.1  42.289  201 116  0 153  353   30  230
## 1009 NP_001348394.1 XP_021331395.1  44.025  159  89  0 208  366    1  159
## 1010 NP_001348394.1 XP_021331253.1  38.849  278 154  3  99  368  151  420
## 1011 NP_001348394.1 XP_021331253.1  41.121  214 126  0 153  366   37  250
## 1012 NP_001348394.1 XP_021331253.1  42.523  214 123  0 153  366   93  306
## 1013 NP_001348394.1 XP_021331253.1  40.541  222 132  0 145  366  113  334
## 1014 NP_001348394.1 XP_021331253.1  41.589  214 125  0 153  366   65  278
## 1015 NP_001348394.1 XP_021331253.1  40.090  222 133  0 145  366    1  222
## 1016 NP_001348394.1 XP_021331253.1  35.294  255 149  2  99  345  179  425
## 1017 NP_001348394.1 NP_001314815.1  42.991  214 122  0 153  366   99  312
## 1018 NP_001348394.1 NP_001314815.1  45.078  193 106  0 174  366   92  284
## 1019 NP_001348394.1 NP_001314815.1  35.581  267 156  2  88  346   62  320
## 1020 NP_001348394.1 XP_021331115.1  40.698  258 153  0 109  366  127  384
## 1021 NP_001348394.1 XP_021331115.1  42.523  214 123  0 153  366  423  636
## 1022 NP_001348394.1 XP_021331115.1  42.991  214 122  0 153  366  367  580
## 1023 NP_001348394.1 XP_021331115.1  39.147  258 157  0 109  366  211  468
## 1024 NP_001348394.1 XP_021331115.1  39.592  245 144  2 126  366   56  300
## 1025 NP_001348394.1 XP_021331115.1  41.589  214 125  0 153  366  395  608
## 1026 NP_001348394.1 XP_021331115.1  42.453  212 122  0 153  364  507  718
## 1027 NP_001348394.1 XP_021331115.1  40.187  214 128  0 153  366  451  664
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## 1029 NP_001348394.1 XP_021331115.1  43.005  193 110  0 174  366  500  692
## 1030 NP_001348394.1 XP_021331115.1  39.720  214 129  0 153  366  339  552
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## 1033 NP_001348394.1 XP_017209855.2  44.860  214 118  0 153  366  255  468
## 1034 NP_001348394.1 XP_017209855.2  42.523  214 123  0 153  366  199  412
## 1035 NP_001348394.1 XP_017209855.2  38.406  276 154  2  99  366  313  580
## 1036 NP_001348394.1 XP_017209855.2  37.687  268 167  0  99  366  173  440
## 1037 NP_001348394.1 XP_017209855.2  37.681  276 156  2  99  366  285  552
## 1038 NP_001348394.1 XP_017209855.2  42.991  214 122  0 153  366  395  608
## 1039 NP_001348394.1 XP_017209855.2  37.681  276 156  2  99  366  369  636
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## 1041 NP_001348394.1 XP_017209855.2  38.174  241 136  1 139  366  116  356
## 1042 NP_001348394.1 XP_017209855.2  36.594  276 159  2  99  366  397  664
## 1043 NP_001348394.1 XP_017209855.2  40.654  214 127  0 153  366  171  384
## 1044 NP_001348394.1 XP_017209855.2  41.589  214 125  0 153  366  479  692
## 1045 NP_001348394.1 XP_017209855.2  38.115  244 147  2 127  366   57  300
## 1046 NP_001348394.1 XP_017209855.2  41.361  191 112  0 153  343  507  697
## 1047 NP_001348394.1 XP_017209855.2  40.000  140  84  0 232  371   82  221
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## 1052 NP_001348394.1 XP_021331020.1  45.327  214 117  0 153  366 1528 1741
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## 1061 NP_001348394.1 XP_021331020.1  38.768  276 153  2  99  366 1306 1573
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## 1072 NP_001348394.1 XP_021331020.1  42.523  214 123  0 153  366  183  396
## 1073 NP_001348394.1 XP_021331020.1  42.056  214 124  0 153  366 3309 3522
## 1074 NP_001348394.1 XP_021331020.1  42.523  214 123  0 153  366 2357 2570
## 1075 NP_001348394.1 XP_021331020.1  44.776  201 111  0 153  353  435  635
## 1076 NP_001348394.1 XP_021331020.1  40.654  214 127  0 153  366 3001 3214
## 1077 NP_001348394.1 XP_021331020.1  43.925  214 120  0 153  366 1472 1685
## 1078 NP_001348394.1 XP_021331020.1  43.925  214 120  0 153  366 3141 3354
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## 1083 NP_001348394.1 XP_021331020.1  38.433  268 165  0  99  366 5268 5535
## 1084 NP_001348394.1 XP_021331020.1  42.056  214 124  0 153  366  267  480
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## 1089 NP_001348394.1 XP_021331020.1  37.050  278 159  2  99  368 1502 1771
## 1090 NP_001348394.1 XP_021331020.1  42.056  214 124  0 153  366 1276 1489
## 1091 NP_001348394.1 XP_021331020.1  42.056  214 124  0 153  366 3365 3578
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## 1093 NP_001348394.1 XP_021331020.1  42.991  214 122  0 153  366 4038 4251
## 1094 NP_001348394.1 XP_021331020.1  38.007  271 162  2  99  366 2779 3046
## 1095 NP_001348394.1 XP_021331020.1  35.739  291 180  1  76  366 3183 3466
## 1096 NP_001348394.1 XP_021331020.1  42.056  214 124  0 153  366 5042 5255
## 1097 NP_001348394.1 XP_021331020.1  36.301  292 179  1  82  366   49  340
## 1098 NP_001348394.1 XP_021331020.1  47.120  191 101  0 176  366   10  200
## 1099 NP_001348394.1 XP_021331020.1  38.290  269 166  0  99  367 4068 4336
## 1100 NP_001348394.1 XP_021331020.1  42.466  219 125  1 148  366 4562 4779
## 1101 NP_001348394.1 XP_021331020.1  41.121  214 126  0 153  366 3337 3550
## 1102 NP_001348394.1 XP_021331020.1  42.056  214 124  0 153  366 1696 1909
## 1103 NP_001348394.1 XP_021331020.1  40.541  222 131  1 145  366  933 1153
## 1104 NP_001348394.1 XP_021331020.1  42.056  214 124  0 153  366 2273 2486
## 1105 NP_001348394.1 XP_021331020.1  42.991  214 122  0 153  366 4234 4447
## 1106 NP_001348394.1 XP_021331020.1  41.395  215 126  0 152  366 1639 1853
## 1107 NP_001348394.1 XP_021331020.1  42.523  214 123  0 153  366  547  760
## 1108 NP_001348394.1 XP_021331020.1  41.589  214 125  0 153  366 5154 5367
## 1109 NP_001348394.1 XP_021331020.1  42.056  214 124  0 153  366 4902 5115
## 1110 NP_001348394.1 XP_021331020.1  41.441  222 130  0 145  366  651  872
## 1111 NP_001348394.1 XP_021331020.1  44.503  191 106  0 176  366 1215 1405
## 1112 NP_001348394.1 XP_021331020.1  36.929  241 150  1 128  366 2050 2290
## 1113 NP_001348394.1 XP_021331020.1  38.007  271 162  2  99  366 2695 2962
## 1114 NP_001348394.1 XP_021331020.1  42.130  216 125  0 153  368 2721 2936
## 1115 NP_001348394.1 XP_021331020.1  41.121  214 126  0 153  366 1416 1629
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## 1116 NP_001348394.1 XP_021331020.1  41.589  214 124  1 153  366 3393 3605
## 1117 NP_001348394.1 XP_021331020.1  45.596  193 105  0 174  366 1241 1433
## 1118 NP_001348394.1 XP_021331020.1  41.121  214 126  0 153  366 2301 2514
## 1119 NP_001348394.1 XP_021331020.1  42.523  214 123  0 153  366 4958 5171
## 1120 NP_001348394.1 XP_021331020.1  36.957  276 158  2  99  366 1390 1657
## 1121 NP_001348394.1 XP_021331020.1  35.870  276 161  2  99  366 1614 1881
## 1122 NP_001348394.1 XP_021331020.1  42.523  214 123  0 153  366 2469 2682
## 1123 NP_001348394.1 XP_021331020.1  42.523  214 123  0 153  366 2693 2906
## 1124 NP_001348394.1 XP_021331020.1  36.232  276 160  2  99  366 2611 2878
## 1125 NP_001348394.1 XP_021331020.1  41.121  214 126  0 153  366 5126 5339
## 1126 NP_001348394.1 XP_021331020.1  35.507  276 162  2  99  366 1698 1965
## 1127 NP_001348394.1 XP_021331020.1  42.056  214 124  0 153  366 3756 3969
## 1128 NP_001348394.1 XP_021331020.1  42.056  214 124  0 153  366  575  788
## 1129 NP_001348394.1 XP_021331020.1  39.256  242 119  1 153  366 4178 4419
## 1130 NP_001348394.1 XP_021331020.1  42.056  214 124  0 153  366 4986 5199
## 1131 NP_001348394.1 XP_021331020.1  40.187  214 128  0 153  366 5098 5311
## 1132 NP_001348394.1 XP_021331020.1  43.564  202 111  1 153  354 4346 4544
## 1133 NP_001348394.1 XP_021331020.1  41.589  214 125  0 153  366 3029 3242
## 1134 NP_001348394.1 XP_021331020.1  40.654  214 127  0 153  366 2161 2374
## 1135 NP_001348394.1 XP_021331020.1  41.121  214 126  0 153  366 4290 4503
## 1136 NP_001348394.1 XP_021331020.1  41.121  214 126  0 153  366  603  816
## 1137 NP_001348394.1 XP_021331020.1  41.589  214 125  0 153  366 5070 5283
## 1138 NP_001348394.1 XP_021331020.1  35.667  300 172  4  77  366 4408 4696
## 1139 NP_001348394.1 XP_021331020.1  39.648  227 137  0 140  366 2316 2542
## 1140 NP_001348394.1 XP_021331020.1  37.363  273 161  4  99  366 2191 2458
## 1141 NP_001348394.1 XP_021331020.1  39.720  214 129  0 153  366 3672 3885
## 1142 NP_001348394.1 XP_021331020.1  37.652  247 126  1 148  366   38  284
## 1143 NP_001348394.1 XP_021331020.1  35.870  276 161  2  99  366 4792 5059
## 1144 NP_001348394.1 XP_021331020.1  40.000  215 129  0 153  367 2217 2431
## 1145 NP_001348394.1 XP_021331020.1  41.121  214 126  0 153  366 3281 3494
## 1146 NP_001348394.1 XP_021331020.1  39.720  214 129  0 153  366 2553 2766
## 1147 NP_001348394.1 XP_021331020.1  37.313  268 168  0  99  366 2723 2990
## 1148 NP_001348394.1 XP_021331020.1  40.654  214 127  0 153  366 2497 2710
## 1149 NP_001348394.1 XP_021331020.1  40.654  214 127  0 153  366 2525 2738
## 1150 NP_001348394.1 XP_021331020.1  36.162  271 167  2  99  366 2835 3102
## 1151 NP_001348394.1 XP_021331020.1  41.589  214 125  0 153  366 2189 2402
## 1152 NP_001348394.1 XP_021331020.1  42.661  218 119  3 153  366  883 1098
## 1153 NP_001348394.1 XP_021331020.1  43.523  193 109  0 174  366 5035 5227
## 1154 NP_001348394.1 XP_021331020.1  42.857  189 108  0 178  366 4343 4531
## 1155 NP_001348394.1 XP_021331020.1  41.589  214 125  0 153  366  631  844
## 1156 NP_001348394.1 XP_021331020.1  39.189  222 135  0 145  366 4866 5087
## 1157 NP_001348394.1 XP_021331020.1  39.720  214 129  0 153  366 2133 2346
## 1158 NP_001348394.1 XP_021331020.1  40.654  214 127  0 153  366 4790 5003
## 1159 NP_001348394.1 XP_021331020.1  41.791  201 117  0 153  353 1836 2036
## 1160 NP_001348394.1 XP_021331020.1  37.681  276 156  3  99  366 4096 4363
## 1161 NP_001348394.1 XP_021331020.1  39.256  242 118  3 153  366 1109 1349
## 1162 NP_001348394.1 XP_021331020.1  41.667  216 125  1 153  368  687  901
## 1163 NP_001348394.1 XP_021331020.1  35.496  262 161  2 109  366 3656 3913
## 1164 NP_001348394.1 XP_021331020.1  39.720  214 129  0 153  366 1164 1377
## 1165 NP_001348394.1 XP_021331020.1  37.190  242 123  2 153  366 3561 3801
## 1166 NP_001348394.1 XP_021331020.1  36.652  221 140  0 148  368 5373 5593
## 1167 NP_001348394.1 XP_021331020.1  38.318  214 132  0 153  366 1808 2021
## 1168 NP_001348394.1 XP_021331020.1  32.895  304 159  4  99  366 4681 4975
## 1169 NP_001348394.1 XP_021331020.1  36.123  227 145  0 140  366 1767 1993
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## 1170 NP_001348394.1 XP_021331020.1  38.318  214 132  0 153  366 3616 3829
## 1171 NP_001348394.1 XP_021331020.1  38.140  215 133  0 153  367 5406 5620
## 1172 NP_001348394.1 XP_021331020.1  44.706  170  94  0 197  366    3  172
## 1173 NP_001348394.1 XP_021331020.1  33.205  259 128  1 153  366 1864 2122
## 1174 NP_001348394.1 XP_021331020.1  46.207  145  78  0 224  368    2  146
## 1175 NP_001348394.1 XP_021331020.1  33.182  220 139  2  99  314 5408 5623
## 1176 NP_001348394.1 XP_021331020.1  35.780  109  70  0 153  261 5518 5626
## 1177 NP_001348394.1 XP_009299138.2  47.396  192 101  0 175  366   59  250
## 1178 NP_001348394.1 XP_009299138.2  39.516  248 139  1 132  368   33  280
## 1179 NP_001348394.1 XP_009299138.2  42.466  219 126  0 148  366  116  334
## 1180 NP_001348394.1 XP_009299138.2  42.523  214 123  0 153  366   93  306
## 1181 NP_001348394.1 XP_009299138.2  41.429  210 123  0 153  362  177  386
## 1182 NP_001348394.1 XP_009299138.2  40.654  214 127  0 153  366  149  362
## 1183 NP_001348394.1 XP_009299138.2  39.490  157  95  0 153  309  233  389
## 1184 NP_001348394.1 XP_017211020.1  43.612  227 127  1 141  366  114  340
## 1185 NP_001348394.1 XP_017211020.1  41.589  214 125  0 153  366   99  312
## 1186 NP_001348394.1 XP_017211020.1  40.654  214 127  0 153  366   71  284
## 1187 NP_001348394.1 XP_017211020.1  42.932  191 109  0 176  366   66  256
## 1188 NP_001348394.1 XP_017211020.1  41.237  194 114  0 153  346  183  376
## 1189 NP_001348394.1 XP_017211020.1  44.203  138  77  0 229  366   63  200
## 1190 NP_001348394.1 XP_017211020.1  35.714   56  36  0 313  368   63  118
## 1191 NP_001348394.1 XP_021331201.1  39.493  276 151  2  99  366  353  620
## 1192 NP_001348394.1 XP_021331201.1  42.056  214 124  0 153  366   71  284
## 1193 NP_001348394.1 XP_021331201.1  38.406  276 154  2  99  366  157  424
## 1194 NP_001348394.1 XP_021331201.1  43.458  214 121  0 153  366  239  452
## 1195 NP_001348394.1 XP_021331201.1  42.056  214 124  0 153  366  463  676
## 1196 NP_001348394.1 XP_021331201.1  43.458  214 121  0 153  366   99  312
## 1197 NP_001348394.1 XP_021331201.1  37.681  276 156  2  99  366  241  508
## 1198 NP_001348394.1 XP_021331201.1  37.681  276 156  2  99  366  213  480
## 1199 NP_001348394.1 XP_021331201.1  42.056  214 124  0 153  366  323  536
## 1200 NP_001348394.1 XP_021331201.1  42.056  214 124  0 153  366   43  256
## 1201 NP_001348394.1 XP_021331201.1  41.589  214 125  0 153  366  127  340
## 1202 NP_001348394.1 XP_021331201.1  40.088  227 136  0 140  366  142  368
## 1203 NP_001348394.1 XP_021331201.1  37.838  222 138  0 145  366    7  228
## 1204 NP_001348394.1 XP_021331201.1  36.397  272 165  2  99  366  297  564
## 1205 NP_001348394.1 XP_021331201.1  39.720  214 129  0 153  366  575  788
## 1206 NP_001348394.1 XP_021331201.1  38.739  222 136  0 145  366  511  732
## 1207 NP_001348394.1 XP_021331201.1  42.487  193 111  0 174  366  652  844
## 1208 NP_001348394.1 XP_021331201.1  33.446  296 169  3  99  366  465  760
## 1209 NP_001348394.1 XP_021331201.1  42.941  170  97  0 197  366    3  172
## 1210 NP_001348394.1 XP_021331201.1  38.318  214 132  0 153  366  603  816
## 1211 NP_001348394.1 XP_021331201.1  39.247  186 113  0 153  338  659  844
## 1212 NP_001348394.1 XP_021331201.1  39.394  165 100  0 153  317  687  851
## 1213 NP_001348394.1 XP_021331201.1  43.151  146  83  0 226  371    4  149
## 1214 NP_001348394.1 XP_021331201.1  43.678   87  49  0 280  366    2   88
## 1215 NP_001348394.1 XP_021331201.1  28.125  160 113  1  75  232  691  850
## 1216 NP_001348394.1 XP_021331200.1  46.262  214 115  0 153  366  221  434
## 1217 NP_001348394.1 XP_021331200.1  44.651  215 119  0 152  366  388  602
## 1218 NP_001348394.1 XP_021331200.1  44.393  214 119  0 153  366  277  490
## 1219 NP_001348394.1 XP_021331200.1  42.991  214 122  0 153  366  333  546
## 1220 NP_001348394.1 XP_021331200.1  37.319  276 157  2  99  366  251  518
## 1221 NP_001348394.1 XP_021331200.1  42.056  214 124  0 153  366  137  350
## 1222 NP_001348394.1 XP_021331200.1  39.912  228 136  1 140  366   95  322
## 1223 NP_001348394.1 XP_021331200.1  43.981  216 119  1 153  366  585  800
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## 1224 NP_001348394.1 XP_021331200.1  42.991  214 122  0 153  366  643  856
## 1225 NP_001348394.1 XP_021331200.1  41.121  214 126  0 153  366  361  574
## 1226 NP_001348394.1 XP_021331200.1  40.654  214 127  0 153  366  165  378
## 1227 NP_001348394.1 XP_021331200.1  43.523  193 109  0 174  366  860 1052
## 1228 NP_001348394.1 XP_021331200.1  45.556  180  98  0 174  353  692  871
## 1229 NP_001348394.1 XP_021331200.1  41.121  214 126  0 153  366  727  940
## 1230 NP_001348394.1 XP_021331200.1  36.594  276 161  2  99  366  559  828
## 1231 NP_001348394.1 XP_021331200.1  40.000  215 129  0 153  367  783  997
## 1232 NP_001348394.1 XP_021331200.1  39.252  214 130  0 153  366  755  968
## 1233 NP_001348394.1 XP_021331200.1  44.444  171  95  0 176  346  890 1060
## 1234 NP_001348394.1 XP_021331200.1  40.513  195 112  2 174  366  832 1024
## 1235 NP_001348394.1 XP_021331200.1  42.945  163  93  0 191  353   91  253
## 1236 NP_001348394.1 XP_021331200.1  44.872  156  86  0 211  366   83  238
## 1237 NP_001348394.1 XP_021331200.1  41.007  139  82  0 153  291  923 1061
## 1238 NP_001348394.1 XP_017210993.2  41.850  227 131  1 140  366   28  253
## 1239 NP_001348394.1 XP_017210993.2  40.930  215 127  0 153  367   96  310
## 1240 NP_001348394.1 XP_017210993.2  39.720  214 129  0 153  366   68  281
## 1241 NP_001348394.1 XP_017210993.2  37.500  240 150  0  99  338   70  309
## 1242 NP_001348394.1 XP_017210993.2  41.104  163  96  0 153  315  152  314
## 1243 NP_001348394.1 XP_017211154.1  43.458  214 121  0 153  366  154  367
## 1244 NP_001348394.1 XP_017211154.1  43.458  214 121  0 153  366  210  423
## 1245 NP_001348394.1 XP_017211154.1  42.991  214 122  0 153  366   42  255
## 1246 NP_001348394.1 XP_017211154.1  42.991  214 122  0 153  366   98  311
## 1247 NP_001348394.1 XP_017211154.1  42.991  214 122  0 153  366  182  395
## 1248 NP_001348394.1 XP_017211154.1  42.991  214 122  0 153  366   70  283
## 1249 NP_001348394.1 XP_017211154.1  36.957  276 158  2  99  366   72  339
## 1250 NP_001348394.1 XP_017211154.1  42.523  214 123  0 153  366   14  227
## 1251 NP_001348394.1 XP_017211154.1  42.523  214 123  0 153  366  238  451
## 1252 NP_001348394.1 XP_017211154.1  36.594  276 159  2  99  366  240  507
## 1253 NP_001348394.1 XP_017211154.1  43.523  193 109  0 174  366    7  199
## 1254 NP_001348394.1 XP_017211154.1  45.882  170  92  0 197  366    2  171
## 1255 NP_001348394.1 XP_017211154.1  35.145  276 163  2  99  366  212  479
## 1256 NP_001348394.1 XP_017211154.1  44.828   87  48  0 280  366    1   87
## 1257 NP_001348394.1 XP_017211261.1  44.393  214 119  0 153  366  155  368
## 1258 NP_001348394.1 XP_017211261.1  38.768  276 153  3  99  366   73  340
## 1259 NP_001348394.1 XP_017211261.1  43.979  191 107  0 176  366   66  256
## 1260 NP_001348394.1 XP_017211261.1  40.708  226 134  0 141  366   59  284
## 1261 NP_001348394.1 XP_017211261.1  40.741  162  96  0 153  314  211  372
## 1262 NP_001348394.1 XP_021327002.1  42.523  214 123  0 153  366   83  296
## 1263 NP_001348394.1 XP_021327002.1  42.523  214 123  0 153  366   55  268
## 1264 NP_001348394.1 XP_021327002.1  41.885  191 111  0 176  366   50  240
## 1265 NP_001348394.1 XP_021327002.1  41.875  160  93  0 153  312  139  298
## 1266 NP_001348394.1 XP_021327001.1  42.523  214 123  0 153  366   83  296
## 1267 NP_001348394.1 XP_021327001.1  42.523  214 123  0 153  366   55  268
## 1268 NP_001348394.1 XP_021327001.1  41.885  191 111  0 176  366   50  240
## 1269 NP_001348394.1 XP_021327001.1  41.875  160  93  0 153  312  139  298
## 1270 NP_001348394.1 XP_021327000.1  42.523  214 123  0 153  366   83  296
## 1271 NP_001348394.1 XP_021327000.1  42.523  214 123  0 153  366   55  268
## 1272 NP_001348394.1 XP_021327000.1  41.885  191 111  0 176  366   50  240
## 1273 NP_001348394.1 XP_021327000.1  41.875  160  93  0 153  312  139  298
## 1274 NP_001348394.1 XP_021326999.1  42.523  214 123  0 153  366   83  296
## 1275 NP_001348394.1 XP_021326999.1  42.523  214 123  0 153  366   55  268
## 1276 NP_001348394.1 XP_021326999.1  41.885  191 111  0 176  366   50  240
## 1277 NP_001348394.1 XP_021326999.1  41.875  160  93  0 153  312  139  298
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## 1278 NP_001348394.1 XP_021330541.1  42.523  214 123  0 153  366   83  296
## 1279 NP_001348394.1 XP_021330541.1  42.523  214 123  0 153  366   55  268
## 1280 NP_001348394.1 XP_021330541.1  41.885  191 111  0 176  366   50  240
## 1281 NP_001348394.1 XP_021330541.1  41.875  160  93  0 153  312  139  298
## 1282 NP_001348394.1 XP_021330540.1  42.523  214 123  0 153  366   83  296
## 1283 NP_001348394.1 XP_021330540.1  42.523  214 123  0 153  366   55  268
## 1284 NP_001348394.1 XP_021330540.1  41.885  191 111  0 176  366   50  240
## 1285 NP_001348394.1 XP_021330540.1  41.875  160  93  0 153  312  139  298
## 1286 NP_001348394.1 XP_021330539.1  42.523  214 123  0 153  366   83  296
## 1287 NP_001348394.1 XP_021330539.1  42.523  214 123  0 153  366   55  268
## 1288 NP_001348394.1 XP_021330539.1  41.885  191 111  0 176  366   50  240
## 1289 NP_001348394.1 XP_021330539.1  41.875  160  93  0 153  312  139  298
## 1290 NP_001348394.1 XP_021330538.1  42.523  214 123  0 153  366   83  296
## 1291 NP_001348394.1 XP_021330538.1  42.523  214 123  0 153  366   55  268
## 1292 NP_001348394.1 XP_021330538.1  41.885  191 111  0 176  366   50  240
## 1293 NP_001348394.1 XP_021330538.1  41.875  160  93  0 153  312  139  298
## 1294 NP_001348394.1 NP_001107078.1  45.078  193 106  0 174  366   91  283
## 1295 NP_001348394.1 NP_001107078.1  41.553  219 127  1 153  371   98  315
## 1296 NP_001348394.1 NP_001107078.1  41.818  165  96  0 153  317  154  318
## 1297 NP_001348394.1 NP_001107078.1  34.343   99  64  1 269  366   45  143
## 1298 NP_001348394.1 NP_001116087.1  43.056  216 123  0 153  368   99  314
## 1299 NP_001348394.1 NP_001116087.1  43.721  215 121  0 153  367  155  369
## 1300 NP_001348394.1 NP_001116087.1  39.916  238 142  1 129  366   48  284
## 1301 NP_001348394.1 NP_001116087.1  43.458  214 121  0 153  366  127  340
## 1302 NP_001348394.1 NP_001116087.1  42.056  214 123  1 153  366  183  395
## 1303 NP_001348394.1 NP_001116087.1  37.037  189  92  1 153  314  211  399
## 1304 NP_001348394.1 NP_001116087.1  34.694  196 111  3  99  286  213  399
## 1305 NP_001348394.1 NP_001116087.1  34.545   55  36  0 316  370   66  120
## 1306 NP_001348394.1 XP_017211199.1  42.723  213 122  0 154  366    1  213
## 1307 NP_001348394.1 XP_017211199.1  42.132  197 114  0 153  349   28  224
## 1308 NP_001348394.1 XP_021330543.1  38.406  276 154  2  99  366  372  639
## 1309 NP_001348394.1 XP_021330543.1  38.971  272 160  2  99  366  118  387
## 1310 NP_001348394.1 XP_021330543.1  38.462  273 158  2  99  366  232  499
## 1311 NP_001348394.1 XP_021330543.1  38.554  249 145  1 118  366  315  555
## 1312 NP_001348394.1 XP_021330543.1  42.991  214 122  0 153  366  454  667
## 1313 NP_001348394.1 XP_021330543.1  37.319  276 157  2  99  366  260  527
## 1314 NP_001348394.1 XP_021330543.1  41.121  214 126  0 153  366  370  583
## 1315 NP_001348394.1 XP_021330543.1  42.593  216 121  2 153  366   61  275
## 1316 NP_001348394.1 XP_021330543.1  41.121  214 126  0 153  366  230  443
## 1317 NP_001348394.1 XP_021330543.1  40.187  214 128  0 153  366  482  695
## 1318 NP_001348394.1 XP_021330543.1  39.819  221 131  1 148  366  111  331
## 1319 NP_001348394.1 XP_021330543.1  39.720  214 129  0 153  366  510  723
## 1320 NP_001348394.1 XP_021330543.1  38.318  214 132  0 153  366  566  779
## 1321 NP_001348394.1 XP_021330543.1  37.895  190 118  0 153  342  594  783
## 1322 NP_001348394.1 XP_021330543.1  35.385  195  97  2 202  367   54  248
## 1323 NP_001348394.1 XP_021330543.1  44.286  140  75  2 229  366   53  191
## 1324 NP_001348394.1 XP_017210948.1  41.121  214 126  0 153  366   99  312
## 1325 NP_001348394.1 XP_017210948.1  42.291  227 130  1 140  366   59  284
## 1326 NP_001348394.1 XP_021327011.1  41.071  224 132  0 145  368   53  276
## 1327 NP_001348394.1 XP_021327011.1  44.330  194 108  0 153  346   89  282
## 1328 NP_001348394.1 XP_021327010.1  41.071  224 132  0 145  368   53  276
## 1329 NP_001348394.1 XP_021327010.1  44.330  194 108  0 153  346   89  282
## 1330 NP_001348394.1 XP_021326474.1  43.458  214 121  0 153  366   15  228
## 1331 NP_001348394.1 XP_021326474.1  42.056  214 124  0 153  366   71  284
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## 1332 NP_001348394.1 XP_021326474.1  44.560  193 107  0 174  366    8  200
## 1333 NP_001348394.1 XP_021326474.1  44.041  193 108  0 174  366   64  256
## 1334 NP_001348394.1 XP_021326474.1  44.737  190 105  0 153  342   99  288
## 1335 NP_001348394.1 XP_021326474.1  44.118  170  95  0 197  366    3  172
## 1336 NP_001348394.1 XP_021326474.1  44.056  143  80  0 224  366    2  144
## 1337 NP_001348394.1 XP_021326474.1  35.294   51  33  0 153  203  239  289
## 1338 NP_001348394.1 XP_021333299.1  42.523  214 123  0 153  366  104  317
## 1339 NP_001348394.1 XP_021333299.1  45.912  159  86  0 208  366  103  261
## 1340 NP_001348394.1 XP_021333299.1  41.875  160  93  0 153  312  160  319
## 1341 NP_001348394.1 XP_021329622.1  38.235  272 160  2  99  366  119  386
## 1342 NP_001348394.1 XP_021329622.1  43.721  215 121  0 153  367  593  807
## 1343 NP_001348394.1 XP_021329622.1  42.731  227 130  0 140  366  440  666
## 1344 NP_001348394.1 XP_021329622.1  42.534  221 127  0 146  366  502  722
## 1345 NP_001348394.1 XP_021329622.1  42.991  214 122  0 153  366  425  638
## 1346 NP_001348394.1 XP_021329622.1  43.458  214 121  0 153  366  201  414
## 1347 NP_001348394.1 XP_021329622.1  43.925  214 120  0 153  366  565  778
## 1348 NP_001348394.1 XP_021329622.1  42.326  215 124  0 153  367  369  583
## 1349 NP_001348394.1 XP_021329622.1  43.458  214 121  0 153  366  621  834
## 1350 NP_001348394.1 XP_021329622.1  41.589  214 125  0 153  366  229  442
## 1351 NP_001348394.1 XP_021329622.1  42.523  214 123  0 153  366  285  498
## 1352 NP_001348394.1 XP_021329622.1  44.103  195 109  0 172  366   52  246
## 1353 NP_001348394.1 XP_021329622.1  41.121  214 126  0 153  366  537  750
## 1354 NP_001348394.1 XP_021329622.1  41.892  222 129  0 145  366   53  274
## 1355 NP_001348394.1 XP_021329622.1  41.121  214 126  0 153  366  257  470
## 1356 NP_001348394.1 XP_021329622.1  42.056  214 124  0 153  366   89  302
## 1357 NP_001348394.1 XP_021329622.1  41.121  214 126  0 153  366  117  330
## 1358 NP_001348394.1 XP_021329622.1  37.313  268 168  0  99  366  623  890
## 1359 NP_001348394.1 XP_021329622.1  38.318  214 132  0 153  366  341  554
## 1360 NP_001348394.1 XP_021329622.1  39.252  214 130  0 153  366  313  526
## 1361 NP_001348394.1 XP_021329622.1  41.837  196 114  0 153  348  733  928
## 1362 NP_001348394.1 XP_017210844.2  44.393  214 119  0 153  366   86  299
## 1363 NP_001348394.1 XP_017210844.2  42.130  216 125  0 153  368   58  273
## 1364 NP_001348394.1 XP_017210844.2  42.396  217 124  1 153  368  198  414
## 1365 NP_001348394.1 XP_017210844.2  42.523  214 123  0 153  366    2  215
## 1366 NP_001348394.1 XP_017210844.2  41.121  214 126  0 153  366   30  243
## 1367 NP_001348394.1 XP_017210844.2  40.930  215 126  1 153  366  142  356
## 1368 NP_001348394.1 XP_017210844.2  44.720  161  89  0 208  368    1  161
## 1369 NP_001348394.1 XP_017210844.2  43.210  162  91  1 153  313  254  415
## 1370 NP_001348394.1 XP_017210844.2  36.047   86  55  0 144  229  330  415
## 1371 NP_001348394.1 XP_021331209.1  43.925  214 120  0 153  366   99  312
## 1372 NP_001348394.1 XP_021331209.1  43.458  214 121  0 153  366  127  340
## 1373 NP_001348394.1 XP_021331209.1  45.596  193 105  0 174  366    8  200
## 1374 NP_001348394.1 XP_021331209.1  42.523  214 123  0 153  366   71  284
## 1375 NP_001348394.1 XP_021331209.1  42.991  214 122  0 153  366  155  368
## 1376 NP_001348394.1 XP_021331209.1  40.088  227 136  0 140  366   30  256
## 1377 NP_001348394.1 XP_021331209.1  42.056  214 124  0 153  366  183  396
## 1378 NP_001348394.1 XP_021331209.1  42.056  214 124  0 153  366  211  424
## 1379 NP_001348394.1 XP_021331209.1  43.529  170  96  0 197  366    3  172
## 1380 NP_001348394.1 XP_021331209.1  41.361  191 112  0 153  343  239  429
## 1381 NP_001348394.1 XP_021331209.1  44.755  143  79  0 224  366    2  144
## 1382 NP_001348394.1 XP_021331301.1  42.056  214 124  0 153  366   71  284
## 1383 NP_001348394.1 XP_021331301.1  42.991  214 122  0 153  366   15  228
## 1384 NP_001348394.1 XP_021331301.1  42.991  214 122  0 153  366  183  396
## 1385 NP_001348394.1 XP_021331301.1  41.589  214 125  0 153  366  127  340
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## 1386 NP_001348394.1 XP_021331301.1  48.235  170  88  0 197  366    3  172
## 1387 NP_001348394.1 XP_021331301.1  41.121  214 126  0 153  366  155  368
## 1388 NP_001348394.1 XP_021331301.1  40.654  214 127  0 153  366   43  256
## 1389 NP_001348394.1 XP_021331301.1  37.319  276 157  3  99  366   45  312
## 1390 NP_001348394.1 XP_021331301.1  43.523  193 109  0 174  366    8  200
## 1391 NP_001348394.1 XP_021331301.1  43.787  169  95  0 174  342  232  400
## 1392 NP_001348394.1 XP_021331301.1  36.800  250 146  4  75  317  159  403
## 1393 NP_001348394.1 XP_021331301.1  45.455  143  78  0 224  366    2  144
## 1394 NP_001348394.1 NP_001315634.1  42.593  216 124  0 153  368  118  333
## 1395 NP_001348394.1 NP_001315634.1  40.969  227 133  1 140  366   50  275
## 1396 NP_001348394.1 NP_001315634.1  41.121  214 126  0 153  366   90  303
## 1397 NP_001348394.1 NP_001315634.1  43.558  163  92  0 153  315  174  336
## 1398 NP_001348394.1 XP_017211055.1  44.860  214 118  0 153  366  143  356
## 1399 NP_001348394.1 XP_017211055.1  42.534  221 127  0 148  368   82  302
## 1400 NP_001348394.1 XP_017211055.1  42.056  214 124  0 153  366  115  328
## 1401 NP_001348394.1 XP_017211055.1  35.688  269 173  0  99  367  145  413
## 1402 NP_001348394.1 XP_017211055.1  38.140  215 133  0 153  367  227  441
## 1403 NP_001348394.1 XP_017211055.1  37.126  167 105  0 148  314  278  444
## 1404 NP_001348394.1 XP_021331342.1  43.458  214 121  0 153  366  127  340
## 1405 NP_001348394.1 XP_021331342.1  42.056  214 124  0 153  366  183  396
## 1406 NP_001348394.1 XP_021331342.1  33.898  295 178  3  77  366  142  424
## 1407 NP_001348394.1 XP_021331342.1  41.589  214 125  0 153  366   99  312
## 1408 NP_001348394.1 XP_021331342.1  37.838  222 138  0 145  366    7  228
## 1409 NP_001348394.1 XP_021331342.1  37.545  277 166  3  99  371  213  486
## 1410 NP_001348394.1 XP_021331342.1  36.940  268 169  0  99  366   17  284
## 1411 NP_001348394.1 XP_021331342.1  43.077  195 111  0 174  368    8  202
## 1412 NP_001348394.1 XP_021331342.1  43.529  170  96  0 197  366    3  172
## 1413 NP_001348394.1 XP_021331342.1  43.678   87  49  0 280  366    2   88
## 1414 NP_001348394.1 NP_001314951.1  44.444  216 120  0 153  368   99  314
## 1415 NP_001348394.1 NP_001314951.1  41.410  227 132  1 140  366   59  284
## 1416 NP_001348394.1 NP_001314951.1  42.784  194 111  0 153  346  127  320
## 1417 NP_001348394.1 XP_021331163.1  46.875  192 102  0 175  366  568  759
## 1418 NP_001348394.1 XP_021331163.1  44.393  214 119  0 153  366  714  927
## 1419 NP_001348394.1 XP_021331163.1  37.681  276 156  2  99  366  604  871
## 1420 NP_001348394.1 XP_021331163.1  41.629  221 129  0 148  368  737  957
## 1421 NP_001348394.1 XP_021331163.1  41.589  214 125  0 153  366  182  395
## 1422 NP_001348394.1 XP_021331163.1  42.056  214 124  0 153  366  602  815
## 1423 NP_001348394.1 XP_021331163.1  41.121  214 126  0 153  366  574  787
## 1424 NP_001348394.1 XP_021331163.1  41.589  214 125  0 153  366  518  731
## 1425 NP_001348394.1 XP_021331163.1  41.589  214 125  0 153  366  686  899
## 1426 NP_001348394.1 XP_021331163.1  39.720  214 129  0 153  366  154  367
## 1427 NP_001348394.1 XP_021331163.1  41.121  214 126  0 153  366  490  703
## 1428 NP_001348394.1 XP_021331163.1  39.252  214 130  0 153  366  126  339
## 1429 NP_001348394.1 XP_021331163.1  39.720  214 129  0 153  366  210  423
## 1430 NP_001348394.1 XP_021331163.1  34.340  265 160  2 116  366   19  283
## 1431 NP_001348394.1 XP_021331163.1  41.589  214 125  0 153  366  406  619
## 1432 NP_001348394.1 XP_021331163.1  38.785  214 131  0 153  366   14  227
## 1433 NP_001348394.1 XP_021331163.1  36.594  276 158  3  99  366  716  982
## 1434 NP_001348394.1 XP_021331163.1  41.969  193 112  0 174  366    7  199
## 1435 NP_001348394.1 XP_021331163.1  40.367  218 130  0 153  370  266  483
## 1436 NP_001348394.1 XP_021331163.1  39.720  214 129  0 153  366  462  675
## 1437 NP_001348394.1 XP_021331163.1  38.785  214 131  0 153  366   98  311
## 1438 NP_001348394.1 XP_021331163.1  41.395  215 126  0 152  366  433  647
## 1439 NP_001348394.1 XP_021331163.1  41.121  214 126  0 153  366  294  507
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## 1440 NP_001348394.1 XP_021331163.1  42.056  214 124  0 153  366  378  591
## 1441 NP_001348394.1 XP_021331163.1  40.187  214 128  0 153  366  350  563
## 1442 NP_001348394.1 XP_021331163.1  41.121  214 126  0 153  366  322  535
## 1443 NP_001348394.1 XP_021331163.1  38.318  214 132  0 153  366  238  451
## 1444 NP_001348394.1 XP_021331163.1  42.941  170  97  0 197  366    2  171
## 1445 NP_001348394.1 XP_021331163.1  39.175  194 117  1 153  346  826 1018
## 1446 NP_001348394.1 XP_021331163.1  42.529   87  50  0 280  366    1   87
## 1447 NP_001348394.1 XP_021331184.1  42.056  214 124  0 153  366  144  357
## 1448 NP_001348394.1 XP_021331184.1  43.458  214 121  0 153  366   32  245
## 1449 NP_001348394.1 XP_021331184.1  43.256  215 122  0 152  366   87  301
## 1450 NP_001348394.1 XP_021331184.1  47.619  189  99  0 178  366    1  189
## 1451 NP_001348394.1 XP_021331184.1  42.991  214 122  0 153  366    4  217
## 1452 NP_001348394.1 XP_021331184.1  41.589  214 125  0 153  366  200  413
## 1453 NP_001348394.1 XP_021331184.1  42.523  214 123  0 153  366  256  469
## 1454 NP_001348394.1 XP_021331184.1  41.121  214 126  0 153  366   60  273
## 1455 NP_001348394.1 XP_021331184.1  41.121  214 126  0 153  366  228  441
## 1456 NP_001348394.1 XP_021331184.1  40.120  167 100  0 146  312  333  499
## 1457 NP_001348394.1 XP_021331203.1  43.925  214 120  0 153  366   71  284
## 1458 NP_001348394.1 XP_021331203.1  42.523  214 123  0 153  366   43  256
## 1459 NP_001348394.1 XP_021331203.1  38.406  276 154  2  99  366  129  396
## 1460 NP_001348394.1 XP_021331203.1  43.458  214 121  0 153  366  211  424
## 1461 NP_001348394.1 XP_021331203.1  39.189  222 135  0 145  366    7  228
## 1462 NP_001348394.1 XP_021331203.1  37.681  276 156  2  99  366  185  452
## 1463 NP_001348394.1 XP_021331203.1  42.056  214 124  0 153  366   99  312
## 1464 NP_001348394.1 XP_021331203.1  42.056  214 124  0 153  366  127  340
## 1465 NP_001348394.1 XP_021331203.1  36.957  276 158  2  99  366  213  480
## 1466 NP_001348394.1 XP_021331203.1  42.056  214 124  0 153  366  295  508
## 1467 NP_001348394.1 XP_021331203.1  42.941  170  97  0 197  366    3  172
## 1468 NP_001348394.1 XP_021331203.1  41.361  191 112  0 153  343  323  513
## 1469 NP_001348394.1 XP_021331203.1  43.678   87  49  0 280  366    2   88
## 1470 NP_001348394.1 XP_021331207.1  43.925  214 120  0 153  366   71  284
## 1471 NP_001348394.1 XP_021331207.1  43.925  214 120  0 153  366  183  396
## 1472 NP_001348394.1 XP_021331207.1  38.406  276 154  2  99  366  185  452
## 1473 NP_001348394.1 XP_021331207.1  38.406  276 154  2  99  366  213  480
## 1474 NP_001348394.1 XP_021331207.1  42.056  214 124  0 153  366   43  256
## 1475 NP_001348394.1 XP_021331207.1  42.523  214 123  0 153  366  155  368
## 1476 NP_001348394.1 XP_021331207.1  40.090  222 133  0 145  366    7  228
## 1477 NP_001348394.1 XP_021331207.1  41.589  214 125  0 153  366   99  312
## 1478 NP_001348394.1 XP_021331207.1  41.121  214 126  0 153  366  127  340
## 1479 NP_001348394.1 XP_021331207.1  43.455  191 108  0 153  343  295  485
## 1480 NP_001348394.1 XP_021331207.1  42.941  170  97  0 197  366    3  172
## 1481 NP_001348394.1 XP_021331207.1  43.678   87  49  0 280  366    2   88
## 1482 NP_001348394.1 XP_021331157.1  47.150  193 102  0 176  368  288  480
## 1483 NP_001348394.1 XP_021331157.1  43.458  214 121  0 153  366  293  506
## 1484 NP_001348394.1 XP_021331157.1  40.541  222 131  1 145  366   34  254
## 1485 NP_001348394.1 XP_021331157.1  41.589  214 124  1 153  366  238  450
## 1486 NP_001348394.1 XP_021331157.1  42.268  194 112  0 153  346  321  514
## 1487 NP_001348394.1 XP_021331157.1  42.487  193 110  1 174  366    8  199
## 1488 NP_001348394.1 XP_021331157.1  42.353  170  97  1 197  366    3  171
## 1489 NP_001348394.1 XP_021331157.1  42.373   59  33  1 308  366    2   59
## 1490 NP_001348394.1 XP_021331231.1  39.852  271 157  2  99  366  133  400
## 1491 NP_001348394.1 XP_021331231.1  41.121  214 126  0 153  366  131  344
## 1492 NP_001348394.1 XP_021331231.1  43.458  214 121  0 153  366  103  316
## 1493 NP_001348394.1 XP_021331231.1  42.661  218 121  1 153  366   15  232
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## 1494 NP_001348394.1 XP_021331231.1  44.670  197 105  1 174  366    8  204
## 1495 NP_001348394.1 XP_021331231.1  44.041  193 108  0 174  366   96  288
## 1496 NP_001348394.1 XP_021331231.1  38.281  256 142  2  99  346  161  408
## 1497 NP_001348394.1 XP_021331231.1  45.143  175  92  1 197  367    3  177
## 1498 NP_001348394.1 XP_021331231.1  43.537  147  79  1 224  366    2  148
## 1499 NP_001348394.1 XP_021331231.1  44.318   88  49  0 281  368    3   90
## 1500 NP_001348394.1 XP_017210987.1  46.939  196 104  0 173  368   79  274
## 1501 NP_001348394.1 XP_017210987.1  45.550  191 104  0 176  366  110  300
## 1502 NP_001348394.1 XP_017210987.1  35.897  273 167  2  99  367   89  357
## 1503 NP_001348394.1 XP_017210987.1  37.963  216 134  0 153  368  115  330
## 1504 NP_001348394.1 XP_017210987.1  35.928  167 107  0 148  314  194  360
## 1505 NP_001348394.1 XP_021331164.1  37.209  301 176  3  69  366  134  424
## 1506 NP_001348394.1 XP_021331164.1  46.632  193 103  0 174  366    8  200
## 1507 NP_001348394.1 XP_021331164.1  42.523  214 123  0 153  366  239  452
## 1508 NP_001348394.1 XP_021331164.1  42.523  214 123  0 153  366  407  620
## 1509 NP_001348394.1 XP_021331164.1  42.056  214 124  0 153  366  463  676
## 1510 NP_001348394.1 XP_021331164.1  34.768  302 179  3  75  366  187  480
## 1511 NP_001348394.1 XP_021331164.1  40.969  227 134  0 140  366   86  312
## 1512 NP_001348394.1 XP_021331164.1  42.991  214 122  0 153  366  631  844
## 1513 NP_001348394.1 XP_021331164.1  42.991  214 122  0 153  366   43  256
## 1514 NP_001348394.1 XP_021331164.1  38.060  268 166  0  99  366   17  284
## 1515 NP_001348394.1 XP_021331164.1  36.395  294 172  3  77  366  114  396
## 1516 NP_001348394.1 XP_021331164.1  41.667  228 132  1 141  367    2  229
## 1517 NP_001348394.1 XP_021331164.1  36.264  273 164  2  99  366  269  536
## 1518 NP_001348394.1 XP_021331164.1  40.654  214 127  0 153  366  351  564
## 1519 NP_001348394.1 XP_021331164.1  42.523  214 123  0 153  366  687  900
## 1520 NP_001348394.1 XP_021331164.1  41.121  214 126  0 153  366  435  648
## 1521 NP_001348394.1 XP_021331164.1  40.654  214 127  0 153  366  519  732
## 1522 NP_001348394.1 XP_021331164.1  40.654  214 127  0 153  366  575  788
## 1523 NP_001348394.1 XP_021331164.1  40.654  214 127  0 153  366  715  928
## 1524 NP_001348394.1 XP_021331164.1  40.654  214 127  0 153  366  379  592
## 1525 NP_001348394.1 XP_021331164.1  42.784  194 111  0 174  367  624  817
## 1526 NP_001348394.1 XP_021331164.1  41.121  214 126  0 153  366  547  760
## 1527 NP_001348394.1 XP_021331164.1  41.237  194 114  0 153  346  743  936
## 1528 NP_001348394.1 XP_021331164.1  42.623   61  35  0 308  368    2   62
## 1529 NP_001348394.1 XP_021331446.1  43.925  214 120  0 153  366  267  480
## 1530 NP_001348394.1 XP_021331446.1  43.056  216 123  0 153  368  323  538
## 1531 NP_001348394.1 XP_021331446.1  43.458  214 121  0 153  366  351  564
## 1532 NP_001348394.1 XP_021331446.1  43.519  216 122  0 153  368  155  370
## 1533 NP_001348394.1 XP_021331446.1  42.523  214 123  0 153  366  295  508
## 1534 NP_001348394.1 XP_021331446.1  43.458  214 121  0 153  366  183  396
## 1535 NP_001348394.1 XP_021331446.1  42.523  214 123  0 153  366  127  340
## 1536 NP_001348394.1 XP_021331446.1  41.589  214 125  0 153  366  211  424
## 1537 NP_001348394.1 XP_021331446.1  40.969  227 133  1 140  366   59  284
## 1538 NP_001348394.1 XP_021331446.1  40.541  222 132  0 145  366   91  312
## 1539 NP_001348394.1 XP_021331446.1  42.029  207 119  1 141  346  366  572
## 1540 NP_001348394.1 XP_021331446.1  40.654  214 127  0 153  366  239  452
## 1541 NP_001348394.1 XP_021331448.1  42.991  214 122  0 153  366  183  396
## 1542 NP_001348394.1 XP_021331448.1  42.523  214 123  0 153  366  211  424
## 1543 NP_001348394.1 XP_021331448.1  43.925  214 120  0 153  366  267  480
## 1544 NP_001348394.1 XP_021331448.1  38.060  268 166  0  99  366   45  312
## 1545 NP_001348394.1 XP_021331448.1  46.632  193 103  0 174  366   36  228
## 1546 NP_001348394.1 XP_021331448.1  43.458  214 121  0 153  366  323  536
## 1547 NP_001348394.1 XP_021331448.1  41.969  193 112  0 174  366    8  200
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## 1548 NP_001348394.1 XP_021331448.1  38.462  273 158  2  99  366  241  508
## 1549 NP_001348394.1 XP_021331448.1  42.056  214 124  0 153  366  127  340
## 1550 NP_001348394.1 XP_021331448.1  42.523  214 123  0 153  366  155  368
## 1551 NP_001348394.1 XP_021331448.1  42.991  214 122  0 153  366  239  452
## 1552 NP_001348394.1 XP_021331448.1  40.969  227 133  1 141  366   30  256
## 1553 NP_001348394.1 XP_021331448.1  41.294  201 118  0 146  346  344  544
## 1554 NP_001348394.1 XP_021331448.1  45.294  170  93  0 197  366    3  172
## 1555 NP_001348394.1 XP_021331448.1  44.755  143  79  0 224  366    2  144
## 1556 NP_001348394.1 XP_021331448.1  43.182   88  50  0 281  368    3   90
## 1557 NP_001348394.1 XP_021326475.1  41.850  227 131  1 140  366   38  263
## 1558 NP_001348394.1 XP_021326475.1  41.121  214 126  0 153  366   78  291
## 1559 NP_001348394.1 XP_021326475.1  41.053  190 112  0 153  342  106  295
## 1560 NP_001348394.1 XP_021326475.1  43.636  165  93  0 153  317  134  298
## 1561 NP_001348394.1 XP_021326475.1  38.384   99  60  1 269  366   25  123
## 1562 NP_001348394.1 XP_021331458.1  42.593  216 124  0 153  368   96  311
## 1563 NP_001348394.1 XP_021331458.1  40.529  227 134  1 140  366   28  253
## 1564 NP_001348394.1 XP_021331458.1  40.654  214 127  0 153  366   68  281
## 1565 NP_001348394.1 XP_021331458.1  43.558  163  92  0 153  315  152  314
## 1566 NP_001348394.1 XP_021331232.1  44.393  214 119  0 153  366  183  396
## 1567 NP_001348394.1 XP_021331232.1  42.991  214 122  0 153  366   43  256
## 1568 NP_001348394.1 XP_021331232.1  41.121  214 126  0 153  366  127  340
## 1569 NP_001348394.1 XP_021331232.1  42.991  214 122  0 153  366   15  228
## 1570 NP_001348394.1 XP_021331232.1  43.458  214 121  0 153  366   99  312
## 1571 NP_001348394.1 XP_021331232.1  42.056  214 124  0 153  366   71  284
## 1572 NP_001348394.1 XP_021331232.1  44.560  193 107  0 174  366    8  200
## 1573 NP_001348394.1 XP_021331232.1  38.281  256 142  2  99  346  157  404
## 1574 NP_001348394.1 XP_021331232.1  45.029  171  94  0 197  367    3  173
## 1575 NP_001348394.1 XP_021331232.1  45.455  143  78  0 224  366    2  144
## 1576 NP_001348394.1 XP_021331425.1  41.333  225 132  0 142  366    1  225
## 1577 NP_001348394.1 XP_021331425.1  42.593  216 124  0 153  368   68  283
## 1578 NP_001348394.1 XP_021331425.1  43.458  214 121  0 153  366   96  309
## 1579 NP_001348394.1 XP_021331425.1  41.121  214 126  0 153  366   40  253
## 1580 NP_001348394.1 XP_021331425.1  43.458  214 121  0 153  366  124  337
## 1581 NP_001348394.1 XP_021331425.1  41.753  194 113  0 153  346  152  345
## 1582 NP_001348394.1 XP_021331425.1  33.846   65  43  0 143  207  282  346
## 1583 NP_001348394.1 XP_017209942.1  42.130  216 125  0 153  368   98  313
## 1584 NP_001348394.1 XP_017209942.1  40.529  227 134  1 140  366   30  255
## 1585 NP_001348394.1 XP_017209942.1  39.640  222 134  0 145  366   62  283
## 1586 NP_001348394.1 XP_017209942.1  43.558  163  92  0 153  315  154  316
## 1587 NP_001348394.1 XP_021331239.1  42.991  214 122  0 153  366   14  227
## 1588 NP_001348394.1 XP_021331239.1  43.458  214 121  0 153  366   70  283
## 1589 NP_001348394.1 XP_021331239.1  41.121  214 126  0 153  366   98  311
## 1590 NP_001348394.1 XP_021331239.1  42.268  194 112  0 174  367    7  200
## 1591 NP_001348394.1 XP_021331239.1  40.206  194 116  0 153  346  126  319
## 1592 NP_001348394.1 XP_021331239.1  43.529  170  96  0 197  366    2  171
## 1593 NP_001348394.1 XP_021331239.1  45.977   87  47  0 280  366    1   87
## 1594 NP_001348394.1 XP_021331239.1  28.205  117  68  2  99  207  212  320
## 1595 NP_001348394.1 XP_017210947.1  40.969  227 133  1 140  366   59  284
## 1596 NP_001348394.1 XP_017210947.1  40.187  214 128  0 153  366   99  312
## 1597 NP_001348394.1 XP_021331509.1  40.541  222 132  0 145  366  110  331
## 1598 NP_001348394.1 XP_021331509.1  40.187  214 128  0 153  366   90  303
## 1599 NP_001348394.1 XP_021331509.1  42.932  191 109  0 176  366   57  247
## 1600 NP_001348394.1 XP_021331509.1  38.938  226 138  0 141  366   50  275
## 1601 NP_001348394.1 XP_021331509.1  42.767  159  91  0 153  311  174  332
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## 1602 NP_001348394.1 XP_021331509.1  42.647  136  78  0 148  283  197  332
## 1603 NP_001348394.1 XP_021331509.1  32.738  168  97  3  99  258  176  335
## 1604 NP_001348394.1 XP_017210643.2  42.523  214 123  0 153  366   77  290
## 1605 NP_001348394.1 XP_017210643.2  42.932  191 109  0 176  366   44  234
## 1606 NP_001348394.1 XP_017210643.2  38.750  240 146  1 127  366   24  262
## 1607 NP_001348394.1 XP_017210643.2  39.070  215 131  0 153  367  133  347
## 1608 NP_001348394.1 XP_017210643.2  42.289  201 116  0 153  353  161  361
## 1609 NP_001348394.1 XP_021331338.1  42.056  214 124  0 153  366  351  564
## 1610 NP_001348394.1 XP_021331338.1  36.803  269 170  0  98  366  352  620
## 1611 NP_001348394.1 XP_021331338.1  42.056  214 124  0 153  366  435  648
## 1612 NP_001348394.1 XP_021331338.1  42.523  214 123  0 153  366  239  452
## 1613 NP_001348394.1 XP_021331338.1  42.523  214 123  0 153  366   99  312
## 1614 NP_001348394.1 XP_021331338.1  41.589  214 125  0 153  366  267  480
## 1615 NP_001348394.1 XP_021331338.1  43.523  193 109  0 174  366  232  424
## 1616 NP_001348394.1 XP_021331338.1  40.000  215 129  0 153  367  295  509
## 1617 NP_001348394.1 XP_021331338.1  41.589  214 125  0 153  366  323  536
## 1618 NP_001348394.1 XP_021331338.1  39.662  237 142  1 130  366   49  284
## 1619 NP_001348394.1 XP_021331338.1  41.429  210 123  0 153  362  463  672
## 1620 NP_001348394.1 XP_021331338.1  41.121  214 126  0 153  366  155  368
## 1621 NP_001348394.1 XP_021331338.1  35.145  276 163  2  99  366  129  396
## 1622 NP_001348394.1 XP_021329613.1  44.393  214 119  0 153  366  856 1069
## 1623 NP_001348394.1 XP_021329613.1  44.393  214 119  0 153  366  828 1041
## 1624 NP_001348394.1 XP_021329613.1  42.793  222 127  0 145  366  792 1013
## 1625 NP_001348394.1 XP_021329613.1  42.009  219 127  0 153  371  512  730
## 1626 NP_001348394.1 XP_021329613.1  44.615  195 108  0 172  366  475  669
## 1627 NP_001348394.1 XP_021329613.1  42.523  214 123  0 153  366   56  269
## 1628 NP_001348394.1 XP_021329613.1  39.076  238 144  1 130  367  462  698
## 1629 NP_001348394.1 XP_021329613.1  38.938  226 138  0 146  371  189  414
## 1630 NP_001348394.1 XP_021329613.1  41.121  214 126  0 153  366  884 1097
## 1631 NP_001348394.1 XP_021329613.1  41.667  216 126  0 153  368  168  383
## 1632 NP_001348394.1 XP_021329613.1  42.056  214 124  0 153  366  140  353
## 1633 NP_001348394.1 XP_021329613.1  42.326  215 124  0 153  367   84  298
## 1634 NP_001348394.1 XP_021329613.1  40.654  214 127  0 153  366  112  325
## 1635 NP_001348394.1 XP_021329613.1  42.932  191 109  0 176  366   51  241
## 1636 NP_001348394.1 XP_021329613.1  40.654  214 127  0 153  366  940 1153
## 1637 NP_001348394.1 XP_021329613.1  37.083  240 123  1  99  338  514  725
## 1638 NP_001348394.1 XP_021329613.1  37.383  214 134  0 153  366  968 1181
## 1639 NP_001348394.1 XP_021329613.1  37.895  190 118  0 153  342  996 1185
## 1640 NP_001348394.1 XP_021331233.1  44.393  214 119  0 153  366  211  424
## 1641 NP_001348394.1 XP_021331233.1  42.523  214 123  0 153  366   15  228
## 1642 NP_001348394.1 XP_021331233.1  41.892  222 129  0 145  366   63  284
## 1643 NP_001348394.1 XP_021331233.1  41.121  214 126  0 153  366  155  368
## 1644 NP_001348394.1 XP_021331233.1  43.458  214 121  0 153  366  127  340
## 1645 NP_001348394.1 XP_021331233.1  42.056  214 124  0 153  366   99  312
## 1646 NP_001348394.1 XP_021331233.1  42.056  214 124  0 153  366   43  256
## 1647 NP_001348394.1 XP_021331233.1  43.814  194 109  0 174  367    8  201
## 1648 NP_001348394.1 XP_021331233.1  38.281  256 142  2  99  346  185  432
## 1649 NP_001348394.1 XP_021331233.1  44.118  170  95  0 197  366    3  172
## 1650 NP_001348394.1 XP_021331233.1  44.755  143  79  0 224  366    2  144
## 1651 NP_001348394.1 XP_021327225.1  42.523  214 123  0 153  366  183  396
## 1652 NP_001348394.1 XP_021327225.1  44.393  214 119  0 153  366  211  424
## 1653 NP_001348394.1 XP_021327225.1  43.458  214 121  0 153  366  267  480
## 1654 NP_001348394.1 XP_021327225.1  42.523  214 123  0 153  366   15  228
## 1655 NP_001348394.1 XP_021327225.1  43.458  214 121  0 153  366   43  256
```

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## 1656 NP_001348394.1 XP_021327225.1  41.892  222 129  0 145  366   63  284
## 1657 NP_001348394.1 XP_021327225.1  40.271  221 132  0 146  366  288  508
## 1658 NP_001348394.1 XP_021327225.1  43.458  214 121  0 153  366  435  648
## 1659 NP_001348394.1 XP_021327225.1  40.991  222 131  0 145  366  231  452
## 1660 NP_001348394.1 XP_021327225.1  42.056  214 124  0 153  366   99  312
## 1661 NP_001348394.1 XP_021327225.1  42.991  214 122  0 153  366  155  368
## 1662 NP_001348394.1 XP_021327225.1  41.629  221 129  0 146  366  456  676
## 1663 NP_001348394.1 XP_021327225.1  40.654  214 127  0 153  366  351  564
## 1664 NP_001348394.1 XP_021327225.1  40.541  222 132  0 145  366  399  620
## 1665 NP_001348394.1 XP_021327225.1  45.078  193 106  0 174  366    8  200
## 1666 NP_001348394.1 XP_021327225.1  39.367  221 134  0 146  366  120  340
## 1667 NP_001348394.1 XP_021327225.1  41.121  214 126  0 153  366  323  536
## 1668 NP_001348394.1 XP_021327225.1  42.941  170  97  0 197  366    3  172
## 1669 NP_001348394.1 XP_021327225.1  42.775  173  99  0 140  312  506  678
## 1670 NP_001348394.1 XP_021327225.1  46.154  143  77  0 224  366    2  144
## 1671 NP_001348394.1 XP_017211057.1  41.700  247 140  2 126  368   56  302
## 1672 NP_001348394.1 XP_017211057.1  38.813  219 134  0 148  366  194  412
## 1673 NP_001348394.1 XP_017211057.1  40.639  219 130  0 148  366  138  356
## 1674 NP_001348394.1 XP_017211057.1  40.594  202 120  0 153  354  227  428
## 1675 NP_001348394.1 XP_017211057.1  38.326  227 140  0 140  366  102  328
## 1676 NP_001348394.1 XP_017211057.1  42.222  180 104  0 174  353  192  371
## 1677 NP_001348394.1 XP_017211057.1  38.095  168 104  0 146  313  276  443
## 1678 NP_001348394.1 XP_017211166.1  40.991  222 131  0 145  366   63  284
## 1679 NP_001348394.1 XP_017211166.1  42.326  215 124  0 153  367  127  341
## 1680 NP_001348394.1 XP_017211166.1  41.969  193 112  0 174  366  120  312
## 1681 NP_001348394.1 XP_017211166.1  36.929  241 152  0  98  338  100  340
## 1682 NP_001348394.1 XP_017211166.1  41.718  163  95  0 153  315  183  345
## 1683 NP_001348394.1 XP_017211166.1  41.007  139  82  0 228  366   62  200
## 1684 NP_001348394.1 XP_021331195.1  42.991  214 122  0 153  366 1221 1434
## 1685 NP_001348394.1 XP_021331195.1  44.860  214 118  0 153  366  661  874
## 1686 NP_001348394.1 XP_021331195.1  43.304  224 127  0 148  371 1300 1523
## 1687 NP_001348394.1 XP_021331195.1  37.319  276 157  2  99  366  999 1266
## 1688 NP_001348394.1 XP_021331195.1  44.393  214 119  0 153  366   99  312
## 1689 NP_001348394.1 XP_021331195.1  43.925  214 120  0 153  366   71  284
## 1690 NP_001348394.1 XP_021331195.1  35.948  306 175  3  69  366  554  846
## 1691 NP_001348394.1 XP_021331195.1  42.991  214 122  0 153  366 1249 1462
## 1692 NP_001348394.1 XP_021331195.1  42.523  214 123  0 153  366 1165 1378
## 1693 NP_001348394.1 XP_021331195.1  36.957  276 158  2  99  366  691  958
## 1694 NP_001348394.1 XP_021331195.1  42.009  219 127  0 148  366  992 1210
## 1695 NP_001348394.1 XP_021331195.1  37.681  276 156  2  99  366  663  930
## 1696 NP_001348394.1 XP_021331195.1  42.523  214 123  0 153  366  267  480
## 1697 NP_001348394.1 XP_021331195.1  33.639  327 180  3  69  366  780 1098
## 1698 NP_001348394.1 XP_021331195.1  36.594  276 159  2  99  366 1139 1406
## 1699 NP_001348394.1 XP_021331195.1  41.589  214 125  0 153  366 1081 1294
## 1700 NP_001348394.1 XP_021331195.1  41.589  214 125  0 153  366 1277 1490
## 1701 NP_001348394.1 XP_021331195.1  42.523  214 123  0 153  366  127  340
## 1702 NP_001348394.1 XP_021331195.1  34.694  294 185  1  73  366  840 1126
## 1703 NP_001348394.1 XP_021331195.1  40.654  214 127  0 153  366  407  620
## 1704 NP_001348394.1 XP_021331195.1  41.121  214 126  0 153  366  379  592
## 1705 NP_001348394.1 XP_021331195.1  40.465  215 128  0 153  367 1109 1323
## 1706 NP_001348394.1 XP_021331195.1  40.000  215 129  0 153  367  941 1155
## 1707 NP_001348394.1 XP_021331195.1  40.183  219 131  0 148  366 1132 1350
## 1708 NP_001348394.1 XP_021331195.1  43.299  194 110  0 174  367  822 1015
## 1709 NP_001348394.1 XP_021331195.1  43.284  201 114  0 153  353  211  411
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## 1710 NP_001348394.1 XP_021331195.1  39.720  214 129  0 153  366  155  368
## 1711 NP_001348394.1 XP_021331195.1  37.705  244 122  1 153  366  463  706
## 1712 NP_001348394.1 XP_021331195.1  43.979  191 107  0 176  366   66  256
## 1713 NP_001348394.1 XP_021331195.1  39.648  227 137  0 140  366  170  396
## 1714 NP_001348394.1 XP_021331195.1  39.381  226 137  0 141  366  339  564
## 1715 NP_001348394.1 XP_021331195.1  41.589  214 125  0 153  366  239  452
## 1716 NP_001348394.1 XP_021331195.1  35.252  278 164  2  99  368  269  538
## 1717 NP_001348394.1 XP_021331195.1  39.252  214 130  0 153  366  969 1182
## 1718 NP_001348394.1 XP_021331195.1  34.167  240 134  1 153  368 1389 1628
## 1719 NP_001348394.1 XP_021331195.1  31.058  293 178  1  99  367 1363 1655
## 1720 NP_001348394.1 XP_021331195.1  33.951  162 103  1 153  314 1501 1658
## 1721 NP_001348394.1 XP_021331195.1  29.592  196 118  2  99  286 1475 1658
## 1722 NP_001348394.1 XP_021330521.1  43.925  214 120  0 153  366  140  353
## 1723 NP_001348394.1 XP_021330521.1  42.991  214 122  0 153  366   56  269
## 1724 NP_001348394.1 XP_021330521.1  42.523  214 123  0 153  366  168  381
## 1725 NP_001348394.1 XP_021330521.1  41.589  214 125  0 153  366  112  325
## 1726 NP_001348394.1 XP_021330521.1  42.326  215 124  0 153  367   84  298
## 1727 NP_001348394.1 XP_021330521.1  38.914  221 135  0 146  366  189  409
## 1728 NP_001348394.1 XP_021330521.1  41.379  203 119  0 164  366   39  241
## 1729 NP_001348394.1 XP_021330521.1  38.889  216 126  4  99  311  198  410
## 1730 NP_001348394.1 XP_021330521.1  41.346  104  61  0 153  256  308  411
## 1731 NP_001348394.1 XP_021330520.1  43.925  214 120  0 153  366  140  353
## 1732 NP_001348394.1 XP_021330520.1  42.991  214 122  0 153  366   56  269
## 1733 NP_001348394.1 XP_021330520.1  42.523  214 123  0 153  366  168  381
## 1734 NP_001348394.1 XP_021330520.1  41.589  214 125  0 153  366  112  325
## 1735 NP_001348394.1 XP_021330520.1  42.326  215 124  0 153  367   84  298
## 1736 NP_001348394.1 XP_021330520.1  38.914  221 135  0 146  366  189  409
## 1737 NP_001348394.1 XP_021330520.1  41.379  203 119  0 164  366   39  241
## 1738 NP_001348394.1 XP_021330520.1  38.889  216 126  4  99  311  198  410
## 1739 NP_001348394.1 XP_021330520.1  41.346  104  61  0 153  256  308  411
## 1740 NP_001348394.1 XP_021330518.1  43.925  214 120  0 153  366  140  353
## 1741 NP_001348394.1 XP_021330518.1  42.991  214 122  0 153  366   56  269
## 1742 NP_001348394.1 XP_021330518.1  42.523  214 123  0 153  366  168  381
## 1743 NP_001348394.1 XP_021330518.1  41.589  214 125  0 153  366  112  325
## 1744 NP_001348394.1 XP_021330518.1  42.326  215 124  0 153  367   84  298
## 1745 NP_001348394.1 XP_021330518.1  38.914  221 135  0 146  366  189  409
## 1746 NP_001348394.1 XP_021330518.1  41.379  203 119  0 164  366   39  241
## 1747 NP_001348394.1 XP_021330518.1  38.889  216 126  4  99  311  198  410
## 1748 NP_001348394.1 XP_021330518.1  41.346  104  61  0 153  256  308  411
## 1749 NP_001348394.1 XP_021327017.1  43.925  214 120  0 153  366  140  353
## 1750 NP_001348394.1 XP_021327017.1  42.991  214 122  0 153  366   56  269
## 1751 NP_001348394.1 XP_021327017.1  42.523  214 123  0 153  366  168  381
## 1752 NP_001348394.1 XP_021327017.1  41.589  214 125  0 153  366  112  325
## 1753 NP_001348394.1 XP_021327017.1  42.326  215 124  0 153  367   84  298
## 1754 NP_001348394.1 XP_021327017.1  38.914  221 135  0 146  366  189  409
## 1755 NP_001348394.1 XP_021327017.1  41.379  203 119  0 164  366   39  241
## 1756 NP_001348394.1 XP_021327017.1  41.398  186 106  3 129  311  225  410
## 1757 NP_001348394.1 XP_021327017.1  41.346  104  61  0 153  256  308  411
## 1758 NP_001348394.1 XP_021327016.1  43.925  214 120  0 153  366  140  353
## 1759 NP_001348394.1 XP_021327016.1  42.991  214 122  0 153  366   56  269
## 1760 NP_001348394.1 XP_021327016.1  42.523  214 123  0 153  366  168  381
## 1761 NP_001348394.1 XP_021327016.1  41.589  214 125  0 153  366  112  325
## 1762 NP_001348394.1 XP_021327016.1  42.326  215 124  0 153  367   84  298
## 1763 NP_001348394.1 XP_021327016.1  38.914  221 135  0 146  366  189  409
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## 1764 NP_001348394.1 XP_021327016.1  41.379  203 119  0 164  366   39  241
## 1765 NP_001348394.1 XP_021327016.1  41.398  186 106  3 129  311  225  410
## 1766 NP_001348394.1 XP_021327016.1  41.346  104  61  0 153  256  308  411
## 1767 NP_001348394.1 XP_021327015.1  43.925  214 120  0 153  366  140  353
## 1768 NP_001348394.1 XP_021327015.1  42.991  214 122  0 153  366   56  269
## 1769 NP_001348394.1 XP_021327015.1  42.523  214 123  0 153  366  168  381
## 1770 NP_001348394.1 XP_021327015.1  41.589  214 125  0 153  366  112  325
## 1771 NP_001348394.1 XP_021327015.1  42.326  215 124  0 153  367   84  298
## 1772 NP_001348394.1 XP_021327015.1  38.914  221 135  0 146  366  189  409
## 1773 NP_001348394.1 XP_021327015.1  41.379  203 119  0 164  366   39  241
## 1774 NP_001348394.1 XP_021327015.1  41.398  186 106  3 129  311  225  410
## 1775 NP_001348394.1 XP_021327015.1  41.346  104  61  0 153  256  308  411
## 1776 NP_001348394.1 XP_021327014.1  43.925  214 120  0 153  366  140  353
## 1777 NP_001348394.1 XP_021327014.1  42.991  214 122  0 153  366   56  269
## 1778 NP_001348394.1 XP_021327014.1  42.523  214 123  0 153  366  168  381
## 1779 NP_001348394.1 XP_021327014.1  41.589  214 125  0 153  366  112  325
## 1780 NP_001348394.1 XP_021327014.1  42.326  215 124  0 153  367   84  298
## 1781 NP_001348394.1 XP_021327014.1  38.914  221 135  0 146  366  189  409
## 1782 NP_001348394.1 XP_021327014.1  41.379  203 119  0 164  366   39  241
## 1783 NP_001348394.1 XP_021327014.1  41.398  186 106  3 129  311  225  410
## 1784 NP_001348394.1 XP_021327014.1  41.346  104  61  0 153  256  308  411
## 1785 NP_001348394.1 XP_021327013.1  43.925  214 120  0 153  366  140  353
## 1786 NP_001348394.1 XP_021327013.1  42.991  214 122  0 153  366   56  269
## 1787 NP_001348394.1 XP_021327013.1  42.523  214 123  0 153  366  168  381
## 1788 NP_001348394.1 XP_021327013.1  41.589  214 125  0 153  366  112  325
## 1789 NP_001348394.1 XP_021327013.1  42.326  215 124  0 153  367   84  298
## 1790 NP_001348394.1 XP_021327013.1  38.914  221 135  0 146  366  189  409
## 1791 NP_001348394.1 XP_021327013.1  41.379  203 119  0 164  366   39  241
## 1792 NP_001348394.1 XP_021327013.1  41.398  186 106  3 129  311  225  410
## 1793 NP_001348394.1 XP_021327013.1  41.346  104  61  0 153  256  308  411
## 1794 NP_001348394.1 XP_021330522.1  43.925  214 120  0 153  366  140  353
## 1795 NP_001348394.1 XP_021330522.1  42.991  214 122  0 153  366   56  269
## 1796 NP_001348394.1 XP_021330522.1  42.523  214 123  0 153  366  168  381
## 1797 NP_001348394.1 XP_021330522.1  41.589  214 125  0 153  366  112  325
## 1798 NP_001348394.1 XP_021330522.1  42.326  215 124  0 153  367   84  298
## 1799 NP_001348394.1 XP_021330522.1  38.914  221 135  0 146  366  189  409
## 1800 NP_001348394.1 XP_021330522.1  41.379  203 119  0 164  366   39  241
## 1801 NP_001348394.1 XP_021330522.1  41.398  186 106  3 129  311  225  410
## 1802 NP_001348394.1 XP_021330522.1  41.346  104  61  0 153  256  308  411
## 1803 NP_001348394.1 XP_021330519.1  43.925  214 120  0 153  366  140  353
## 1804 NP_001348394.1 XP_021330519.1  42.991  214 122  0 153  366   56  269
## 1805 NP_001348394.1 XP_021330519.1  42.523  214 123  0 153  366  168  381
## 1806 NP_001348394.1 XP_021330519.1  41.589  214 125  0 153  366  112  325
## 1807 NP_001348394.1 XP_021330519.1  42.326  215 124  0 153  367   84  298
## 1808 NP_001348394.1 XP_021330519.1  38.914  221 135  0 146  366  189  409
## 1809 NP_001348394.1 XP_021330519.1  41.379  203 119  0 164  366   39  241
## 1810 NP_001348394.1 XP_021330519.1  41.398  186 106  3 129  311  225  410
## 1811 NP_001348394.1 XP_021330519.1  41.346  104  61  0 153  256  308  411
## 1812 NP_001348394.1 XP_021330517.1  43.925  214 120  0 153  366  140  353
## 1813 NP_001348394.1 XP_021330517.1  42.991  214 122  0 153  366   56  269
## 1814 NP_001348394.1 XP_021330517.1  42.523  214 123  0 153  366  168  381
## 1815 NP_001348394.1 XP_021330517.1  41.589  214 125  0 153  366  112  325
## 1816 NP_001348394.1 XP_021330517.1  42.326  215 124  0 153  367   84  298
## 1817 NP_001348394.1 XP_021330517.1  38.914  221 135  0 146  366  189  409
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## 1818 NP_001348394.1 XP_021330517.1  41.379  203 119  0 164  366   39  241
## 1819 NP_001348394.1 XP_021330517.1  41.398  186 106  3 129  311  225  410
## 1820 NP_001348394.1 XP_021330517.1  41.346  104  61  0 153  256  308  411
## 1821 NP_001348394.1 XP_021330516.1  43.925  214 120  0 153  366  140  353
## 1822 NP_001348394.1 XP_021330516.1  42.991  214 122  0 153  366   56  269
## 1823 NP_001348394.1 XP_021330516.1  42.523  214 123  0 153  366  168  381
## 1824 NP_001348394.1 XP_021330516.1  41.589  214 125  0 153  366  112  325
## 1825 NP_001348394.1 XP_021330516.1  42.326  215 124  0 153  367   84  298
## 1826 NP_001348394.1 XP_021330516.1  38.914  221 135  0 146  366  189  409
## 1827 NP_001348394.1 XP_021330516.1  41.379  203 119  0 164  366   39  241
## 1828 NP_001348394.1 XP_021330516.1  41.398  186 106  3 129  311  225  410
## 1829 NP_001348394.1 XP_021330516.1  41.346  104  61  0 153  256  308  411
## 1830 NP_001348394.1 XP_021330515.1  43.925  214 120  0 153  366  140  353
## 1831 NP_001348394.1 XP_021330515.1  42.991  214 122  0 153  366   56  269
## 1832 NP_001348394.1 XP_021330515.1  42.523  214 123  0 153  366  168  381
## 1833 NP_001348394.1 XP_021330515.1  41.589  214 125  0 153  366  112  325
## 1834 NP_001348394.1 XP_021330515.1  42.326  215 124  0 153  367   84  298
## 1835 NP_001348394.1 XP_021330515.1  38.914  221 135  0 146  366  189  409
## 1836 NP_001348394.1 XP_021330515.1  41.379  203 119  0 164  366   39  241
## 1837 NP_001348394.1 XP_021330515.1  41.398  186 106  3 129  311  225  410
## 1838 NP_001348394.1 XP_021330515.1  41.346  104  61  0 153  256  308  411
## 1839 NP_001348394.1 XP_021330514.1  43.925  214 120  0 153  366  140  353
## 1840 NP_001348394.1 XP_021330514.1  42.991  214 122  0 153  366   56  269
## 1841 NP_001348394.1 XP_021330514.1  42.523  214 123  0 153  366  168  381
## 1842 NP_001348394.1 XP_021330514.1  41.589  214 125  0 153  366  112  325
## 1843 NP_001348394.1 XP_021330514.1  42.326  215 124  0 153  367   84  298
## 1844 NP_001348394.1 XP_021330514.1  38.914  221 135  0 146  366  189  409
## 1845 NP_001348394.1 XP_021330514.1  41.379  203 119  0 164  366   39  241
## 1846 NP_001348394.1 XP_021330514.1  41.398  186 106  3 129  311  225  410
## 1847 NP_001348394.1 XP_021330514.1  41.346  104  61  0 153  256  308  411
## 1848 NP_001348394.1 XP_021329720.1  42.991  214 122  0 153  366  187  400
## 1849 NP_001348394.1 XP_021329720.1  37.200  250 149  1 118  367  216  457
## 1850 NP_001348394.1 XP_021329720.1  42.130  216 125  0 153  368  271  486
## 1851 NP_001348394.1 XP_021329720.1  41.589  214 125  0 153  366  159  372
## 1852 NP_001348394.1 XP_021329720.1  41.589  214 125  0 153  366  215  428
## 1853 NP_001348394.1 XP_021329720.1  41.589  214 125  0 153  366  131  344
## 1854 NP_001348394.1 XP_021329720.1  42.056  214 124  0 153  366   47  260
## 1855 NP_001348394.1 XP_021329720.1  43.979  191 107  0 176  366   42  232
## 1856 NP_001348394.1 XP_021329720.1  41.121  214 126  0 153  366   75  288
## 1857 NP_001348394.1 XP_021329720.1  39.720  214 129  0 153  366  103  316
## 1858 NP_001348394.1 XP_021329720.1  40.654  214 127  0 153  366  299  512
## 1859 NP_001348394.1 XP_021329720.1  40.376  213 127  0 153  365  327  539
## 1860 NP_001348394.1 XP_017210823.1  46.632  193 103  0 176  368   82  274
## 1861 NP_001348394.1 XP_017210823.1  45.026  191 105  0 176  366  110  300
## 1862 NP_001348394.1 XP_017210823.1  35.531  273 168  2  99  367   89  357
## 1863 NP_001348394.1 XP_017210823.1  35.329  167 108  0 148  314  194  360
## 1864 NP_001348394.1 XP_017211225.1  42.523  214 123  0 153  366   71  284
## 1865 NP_001348394.1 XP_017211225.1  42.727  220 120  1 153  366  155  374
## 1866 NP_001348394.1 XP_017211225.1  43.455  191 108  0 176  366   66  256
## 1867 NP_001348394.1 XP_017211225.1  40.909  220 124  1 153  366   99  318
## 1868 NP_001348394.1 XP_017211225.1  40.609  197 111  1 153  343  183  379
## 1869 NP_001348394.1 XP_021330715.1  48.718  195 100  0 174  368   91  285
## 1870 NP_001348394.1 XP_021330715.1  44.053  227 126  1 141  366  281  507
## 1871 NP_001348394.1 XP_021330715.1  44.860  214 118  0 153  366  742  955
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## 1872 NP_001348394.1 XP_021330715.1  43.925  214 120  0 153  366  350  563
## 1873 NP_001348394.1 XP_021330715.1  39.852  271 157  2  99  366  828 1095
## 1874 NP_001348394.1 XP_021330715.1  43.458  214 121  0 153  366  658  871
## 1875 NP_001348394.1 XP_021330715.1  41.256  223 131  0 146  368 1015 1237
## 1876 NP_001348394.1 XP_021330715.1  42.326  215 124  0 153  367  686  900
## 1877 NP_001348394.1 XP_021330715.1  37.638  271 162  3  99  366  996 1262
## 1878 NP_001348394.1 XP_021330715.1  36.232  276 160  2  99  366  912 1179
## 1879 NP_001348394.1 XP_021330715.1  41.850  227 131  1 141  366  253  479
## 1880 NP_001348394.1 XP_021330715.1  44.103  195 109  0 174  368   63  257
## 1881 NP_001348394.1 XP_021330715.1  41.121  214 126  0 153  366  378  591
## 1882 NP_001348394.1 XP_021330715.1  41.121  214 126  0 153  366  994 1207
## 1883 NP_001348394.1 XP_021330715.1  36.929  241 139  1 139  366  603  843
## 1884 NP_001348394.1 XP_021330715.1  42.056  214 124  0 153  366   98  311
## 1885 NP_001348394.1 XP_021330715.1  41.589  214 125  0 153  366  406  619
## 1886 NP_001348394.1 XP_021330715.1  40.654  214 127  0 153  366  770  983
## 1887 NP_001348394.1 XP_021330715.1  44.041  193 108  0 174  366   35  227
## 1888 NP_001348394.1 XP_021330715.1  41.589  214 125  0 153  366  798 1011
## 1889 NP_001348394.1 XP_021330715.1  42.523  214 123  0 153  366  210  423
## 1890 NP_001348394.1 XP_021330715.1  36.940  268 169  0  99  366  184  451
## 1891 NP_001348394.1 XP_021330715.1  40.187  214 128  0 153  366  826 1039
## 1892 NP_001348394.1 XP_021330715.1  35.870  276 161  2  99  366  100  367
## 1893 NP_001348394.1 XP_021330715.1  42.564  195 108  2 174  366    7  199
## 1894 NP_001348394.1 XP_021330715.1  40.000  215 129  0 153  367  490  704
## 1895 NP_001348394.1 XP_021330715.1  40.183  219 131  0 148  366  429  647
## 1896 NP_001348394.1 XP_021330715.1  36.194  268 171  0  99  366  520  787
## 1897 NP_001348394.1 XP_021330715.1  35.357  280 165  3  95  366  488  759
## 1898 NP_001348394.1 XP_021330715.1  43.005  193 110  0 174  366  735  927
## 1899 NP_001348394.1 XP_021330715.1  39.720  214 129  0 153  366  602  815
## 1900 NP_001348394.1 XP_021330715.1  34.983  303 154  3  99  366 1024 1318
## 1901 NP_001348394.1 XP_021330715.1  38.494  239 120  1 153  364 1106 1344
## 1902 NP_001348394.1 XP_021330715.1  40.654  214 127  0 153  366  462  675
## 1903 NP_001348394.1 XP_021330715.1  43.605  172  93  2 197  366    2  171
## 1904 NP_001348394.1 XP_021330715.1  36.321  212 108  1 153  337 1134 1345
## 1905 NP_001348394.1 XP_021330715.1  41.045  134  78  1 153  286 1218 1350
## 1906 NP_001348394.1 XP_021330715.1  45.977   87  47  0 280  366    1   87
## 1907 NP_001348394.1 XP_021331422.1  42.991  214 122  0 153  366   43  256
## 1908 NP_001348394.1 XP_021331422.1  37.500  280 159  3  95  366  153  424
## 1909 NP_001348394.1 XP_021331422.1  46.114  193 104  0 174  366   36  228
## 1910 NP_001348394.1 XP_021331422.1  37.681  276 156  3  99  366   73  340
## 1911 NP_001348394.1 XP_021331422.1  42.523  214 123  0 153  366   71  284
## 1912 NP_001348394.1 XP_021331422.1  37.132  272 163  2  99  366   45  312
## 1913 NP_001348394.1 XP_021331422.1  41.969  193 112  0 174  366    8  200
## 1914 NP_001348394.1 XP_021331422.1  45.294  170  93  0 197  366    3  172
## 1915 NP_001348394.1 XP_021331422.1  43.125  160  91  0 153  312  267  426
## 1916 NP_001348394.1 XP_021331422.1  45.455  143  78  0 224  366    2  144
## 1917 NP_001348394.1 XP_021331422.1  26.549  113  73  2  95  202  321  428
## 1918 NP_001348394.1 XP_021331159.1  42.056  214 124  0 153  366   71  284
## 1919 NP_001348394.1 XP_021331159.1  42.056  214 124  0 153  366   99  312
## 1920 NP_001348394.1 XP_021331159.1  43.925  214 120  0 153  366  127  340
## 1921 NP_001348394.1 XP_021331159.1  43.455  191 108  0 176  366   66  256
## 1922 NP_001348394.1 XP_021331159.1  42.408  191 110  0 153  343  183  373
## 1923 NP_001348394.1 XP_009300324.1  42.991  214 122  0 153  366  170  383
## 1924 NP_001348394.1 XP_009300324.1  37.200  250 149  1 118  367  199  440
## 1925 NP_001348394.1 XP_009300324.1  42.130  216 125  0 153  368  254  469
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## 1926 NP_001348394.1 XP_009300324.1  41.589  214 125  0 153  366  142  355
## 1927 NP_001348394.1 XP_009300324.1  41.589  214 125  0 153  366  198  411
## 1928 NP_001348394.1 XP_009300324.1  41.589  214 125  0 153  366  114  327
## 1929 NP_001348394.1 XP_009300324.1  42.056  214 124  0 153  366   30  243
## 1930 NP_001348394.1 XP_009300324.1  43.979  191 107  0 176  366   25  215
## 1931 NP_001348394.1 XP_009300324.1  41.121  214 126  0 153  366   58  271
## 1932 NP_001348394.1 XP_009300324.1  39.720  214 129  0 153  366   86  299
## 1933 NP_001348394.1 XP_009300324.1  40.654  214 127  0 153  366  282  495
## 1934 NP_001348394.1 XP_009300324.1  40.376  213 127  0 153  365  310  522
## 1935 NP_001348394.1 XP_009298780.3  41.667  216 126  0 153  368    7  222
## 1936 NP_001348394.1 XP_009298780.3  42.991  214 122  0 153  366  119  332
## 1937 NP_001348394.1 XP_009298780.3  42.202  218 126  0 153  370  147  364
## 1938 NP_001348394.1 XP_009298780.3  43.925  214 120  0 153  366   35  248
## 1939 NP_001348394.1 XP_009298780.3  42.056  214 124  0 153  366  175  388
## 1940 NP_001348394.1 XP_009298780.3  36.232  276 160  2  99  366   37  304
## 1941 NP_001348394.1 XP_009298780.3  43.750  192 108  0 175  366    1  192
## 1942 NP_001348394.1 XP_009298780.3  41.969  193 112  0 144  336  222  414
## 1943 NP_001348394.1 XP_009298780.3  40.094  212 127  0 153  364  203  414
## 1944 NP_001348394.1 XP_017211215.2  44.186  215 120  0 152  366  408  622
## 1945 NP_001348394.1 XP_017211215.2  39.493  276 151  2  99  366  579  846
## 1946 NP_001348394.1 XP_017211215.2  42.991  214 122  0 153  366  689  902
## 1947 NP_001348394.1 XP_017211215.2  43.925  214 120  0 153  366  297  510
## 1948 NP_001348394.1 XP_017211215.2  43.439  221 123  1 148  366   38  258
## 1949 NP_001348394.1 XP_017211215.2  42.991  214 122  0 153  366  269  482
## 1950 NP_001348394.1 XP_017211215.2  42.991  214 122  0 153  366  353  566
## 1951 NP_001348394.1 XP_017211215.2  37.319  276 157  2  99  366  411  678
## 1952 NP_001348394.1 XP_017211215.2  40.930  215 127  0 152  366  744  958
## 1953 NP_001348394.1 XP_017211215.2  41.121  214 126  0 153  366  801 1014
## 1954 NP_001348394.1 XP_017211215.2  42.523  214 123  0 153  366  549  762
## 1955 NP_001348394.1 XP_017211215.2  42.991  214 122  0 153  366   15  228
## 1956 NP_001348394.1 XP_017211215.2  44.340  212 118  0 153  364  241  452
## 1957 NP_001348394.1 XP_017211215.2  42.991  214 122  0 153  366  325  538
## 1958 NP_001348394.1 XP_017211215.2  35.870  276 161  2  99  366  439  706
## 1959 NP_001348394.1 XP_017211215.2  42.130  216 123  1 153  366  211  426
## 1960 NP_001348394.1 XP_017211215.2  41.121  214 126  0 153  366  381  594
## 1961 NP_001348394.1 XP_017211215.2  44.041  193 108  0 174  366    8  200
## 1962 NP_001348394.1 XP_017211215.2  40.654  214 127  0 153  366  521  734
## 1963 NP_001348394.1 XP_017211215.2  36.431  269 171  0  99  367  803 1071
## 1964 NP_001348394.1 XP_017211215.2  36.594  276 159  2  99  366  719  986
## 1965 NP_001348394.1 XP_017211215.2  45.882  170  92  0 197  366    3  172
## 1966 NP_001348394.1 XP_017211215.2  43.529  170  96  0 174  343  906 1075
## 1967 NP_001348394.1 XP_017211215.2  45.455  143  78  0 224  366    2  144
## 1968 NP_001348394.1 XP_017211215.2  29.630  216 124  1  99  286  859 1074
## 1969 NP_001348394.1 XP_021327003.1  42.731  227 130  0 140  366  935 1161
## 1970 NP_001348394.1 XP_021327003.1  42.991  214 122  0 153  366  500  713
## 1971 NP_001348394.1 XP_021327003.1  38.768  276 153  3  99  366  250  517
## 1972 NP_001348394.1 XP_021327003.1  36.700  297 160  3  99  367  782 1078
## 1973 NP_001348394.1 XP_021327003.1  42.991  214 122  0 153  366 1088 1301
## 1974 NP_001348394.1 XP_021327003.1  44.393  214 119  0 153  366  528  741
## 1975 NP_001348394.1 XP_021327003.1  42.081  221 128  0 146  366  997 1217
## 1976 NP_001348394.1 XP_021327003.1  38.406  276 154  2  99  366  306  573
## 1977 NP_001348394.1 XP_021327003.1  45.327  214 117  0 153  366 1116 1329
## 1978 NP_001348394.1 XP_021327003.1  43.458  214 121  0 153  366  724  937
## 1979 NP_001348394.1 XP_021327003.1  42.991  214 122  0 153  366  780  993
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## 1980 NP_001348394.1 XP_021327003.1  42.523  214 123  0 153  366  696  909
## 1981 NP_001348394.1 XP_021327003.1  43.458  214 121  0 153  366 1060 1273
## 1982 NP_001348394.1 XP_021327003.1  45.078  193 106  0 174  366  241  433
## 1983 NP_001348394.1 XP_021327003.1  35.473  296 163  3  99  366  334  629
## 1984 NP_001348394.1 XP_021327003.1  42.991  214 122  0 153  366  640  853
## 1985 NP_001348394.1 XP_021327003.1  41.589  214 125  0 153  366  472  685
## 1986 NP_001348394.1 XP_021327003.1  41.121  214 126  0 153  366  584  797
## 1987 NP_001348394.1 XP_021327003.1  41.589  214 125  0 153  366  556  769
## 1988 NP_001348394.1 XP_021327003.1  43.925  214 120  0 153  366   80  293
## 1989 NP_001348394.1 XP_021327003.1  40.654  214 127  0 153  366  668  881
## 1990 NP_001348394.1 XP_021327003.1  41.589  214 125  0 153  366  444  657
## 1991 NP_001348394.1 XP_021327003.1  40.465  215 128  0 153  367  136  350
## 1992 NP_001348394.1 XP_021327003.1  37.687  268 167  0  99  366 1118 1385
## 1993 NP_001348394.1 XP_021327003.1  41.589  214 125  0 153  366  192  405
## 1994 NP_001348394.1 XP_021327003.1  34.471  293 179  3  77  366  683  965
## 1995 NP_001348394.1 XP_021327003.1  41.121  214 126  0 153  366  248  461
## 1996 NP_001348394.1 XP_021327003.1  40.654  214 127  0 153  366  164  377
## 1997 NP_001348394.1 XP_021327003.1  37.349  249 148  1 118  366   81  321
## 1998 NP_001348394.1 XP_021327003.1  45.550  191 104  0 176  366   75  265
## 1999 NP_001348394.1 XP_021327003.1  41.753  194 113  0 153  346 1228 1421
## 2000 NP_001348394.1 XP_021327003.1  42.754  138  79  0 229  366   72  209
## 2001 NP_001348394.1 XP_021330542.1  42.731  227 130  0 140  366  935 1161
## 2002 NP_001348394.1 XP_021330542.1  42.991  214 122  0 153  366  500  713
## 2003 NP_001348394.1 XP_021330542.1  38.768  276 153  3  99  366  250  517
## 2004 NP_001348394.1 XP_021330542.1  36.700  297 160  3  99  367  782 1078
## 2005 NP_001348394.1 XP_021330542.1  42.991  214 122  0 153  366 1088 1301
## 2006 NP_001348394.1 XP_021330542.1  44.393  214 119  0 153  366  528  741
## 2007 NP_001348394.1 XP_021330542.1  42.081  221 128  0 146  366  997 1217
## 2008 NP_001348394.1 XP_021330542.1  38.406  276 154  2  99  366  306  573
## 2009 NP_001348394.1 XP_021330542.1  45.327  214 117  0 153  366 1116 1329
## 2010 NP_001348394.1 XP_021330542.1  43.458  214 121  0 153  366  724  937
## 2011 NP_001348394.1 XP_021330542.1  42.991  214 122  0 153  366  780  993
## 2012 NP_001348394.1 XP_021330542.1  42.523  214 123  0 153  366  696  909
## 2013 NP_001348394.1 XP_021330542.1  43.458  214 121  0 153  366 1060 1273
## 2014 NP_001348394.1 XP_021330542.1  45.078  193 106  0 174  366  241  433
## 2015 NP_001348394.1 XP_021330542.1  35.473  296 163  3  99  366  334  629
## 2016 NP_001348394.1 XP_021330542.1  42.991  214 122  0 153  366  640  853
## 2017 NP_001348394.1 XP_021330542.1  41.589  214 125  0 153  366  472  685
## 2018 NP_001348394.1 XP_021330542.1  41.121  214 126  0 153  366  584  797
## 2019 NP_001348394.1 XP_021330542.1  41.589  214 125  0 153  366  556  769
## 2020 NP_001348394.1 XP_021330542.1  43.925  214 120  0 153  366   80  293
## 2021 NP_001348394.1 XP_021330542.1  40.654  214 127  0 153  366  668  881
## 2022 NP_001348394.1 XP_021330542.1  41.589  214 125  0 153  366  444  657
## 2023 NP_001348394.1 XP_021330542.1  40.465  215 128  0 153  367  136  350
## 2024 NP_001348394.1 XP_021330542.1  37.687  268 167  0  99  366 1118 1385
## 2025 NP_001348394.1 XP_021330542.1  41.589  214 125  0 153  366  192  405
## 2026 NP_001348394.1 XP_021330542.1  34.471  293 179  3  77  366  683  965
## 2027 NP_001348394.1 XP_021330542.1  41.121  214 126  0 153  366  248  461
## 2028 NP_001348394.1 XP_021330542.1  40.654  214 127  0 153  366  164  377
## 2029 NP_001348394.1 XP_021330542.1  37.349  249 148  1 118  366   81  321
## 2030 NP_001348394.1 XP_021330542.1  45.550  191 104  0 176  366   75  265
## 2031 NP_001348394.1 XP_021330542.1  41.753  194 113  0 153  346 1228 1421
## 2032 NP_001348394.1 XP_021330542.1  42.754  138  79  0 229  366   72  209
## 2033 NP_001348394.1 NP_001307132.1  41.589  214 125  0 153  366   99  312
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## 2034 NP_001348394.1 NP_001307132.1  43.979  191 107  0 176  366   66  256
## 2035 NP_001348394.1 NP_001307132.1  39.662  237 142  1 130  366   49  284
## 2036 NP_001348394.1 NP_001307132.1  43.158  190 108  0 153  342  127  316
## 2037 NP_001348394.1 NP_001307132.1  36.697  218 138  0  99  316  101  318
## 2038 NP_001348394.1 NP_001307132.1  45.679   81  44  0 288  368   66  146
## 2039 NP_001348394.1 XP_021331474.1  42.056  214 124  0 153  366  124  337
## 2040 NP_001348394.1 XP_021331474.1  37.751  249 151  1 122  366    5  253
## 2041 NP_001348394.1 XP_021331474.1  40.541  222 132  0 145  366  172  393
## 2042 NP_001348394.1 XP_021331474.1  41.589  214 125  0 153  366  152  365
## 2043 NP_001348394.1 XP_021331474.1  40.187  214 128  0 153  366   96  309
## 2044 NP_001348394.1 XP_021331474.1  43.523  193 109  0 174  366   89  281
## 2045 NP_001348394.1 XP_021331474.1  43.125  160  91  0 153  312  236  395
## 2046 NP_001348394.1 XP_021331474.1  28.571  112  64  3  99  202  294  397
## 2047 NP_001348394.1 XP_021331043.1  44.503  191 106  0 176  366   34  224
## 2048 NP_001348394.1 XP_021331043.1  38.494  239 145  1 115  353    3  239
## 2049 NP_001348394.1 XP_021331043.1  46.377   69  37  0 174  242  172  240
## 2050 NP_001348394.1 XP_021330856.1  38.431  255 128  2 140  366   64  317
## 2051 NP_001348394.1 XP_021330856.1  43.796  137  77  0 232  368   71  207
## 2052 NP_001348394.1 XP_021331371.1  43.523  193 109  0 174  366    4  196
## 2053 NP_001348394.1 XP_021331371.1  41.204  216 127  0 153  368   11  226
## 2054 NP_001348394.1 XP_021331371.1  38.596  228 139  1 145  371   31  258
## 2055 NP_001348394.1 XP_021331371.1  41.071  168  99  0 199  366    1  168
## 2056 NP_001348394.1 XP_021331127.1  38.433  268 165  0  99  366   17  284
## 2057 NP_001348394.1 XP_021331127.1  38.148  270 167  0  99  368  269  538
## 2058 NP_001348394.1 XP_021331127.1  36.177  293 174  3  77  366  282  564
## 2059 NP_001348394.1 XP_021331127.1  44.560  193 107  0 174  366    8  200
## 2060 NP_001348394.1 XP_021331127.1  42.130  216 125  0 153  368   15  230
## 2061 NP_001348394.1 XP_021331127.1  40.187  214 128  0 153  366  155  368
## 2062 NP_001348394.1 XP_021331127.1  39.720  214 129  0 153  366  211  424
## 2063 NP_001348394.1 XP_021331127.1  41.121  214 126  0 153  366  127  340
## 2064 NP_001348394.1 XP_021331127.1  38.174  241 146  1 129  366  212  452
## 2065 NP_001348394.1 XP_021331127.1  43.367  196 111  0 153  348  379  574
## 2066 NP_001348394.1 XP_021331127.1  41.121  214 126  0 153  366   99  312
## 2067 NP_001348394.1 XP_021331127.1  45.882  170  92  0 197  366    3  172
## 2068 NP_001348394.1 XP_021331127.1  45.455  143  78  0 224  366    2  144
## 2069 NP_001348394.1 XP_021331218.1  42.035  226 131  0 141  366  108  333
## 2070 NP_001348394.1 XP_021331218.1  41.071  224 128  1 143  366   86  305
## 2071 NP_001348394.1 XP_021331218.1  41.589  214 125  0 153  366  176  389
## 2072 NP_001348394.1 XP_021331218.1  37.885  227 141  0 140  366  135  361
## 2073 NP_001348394.1 XP_021331255.1  43.523  193 109  0 174  366    8  200
## 2074 NP_001348394.1 XP_021331255.1  41.584  202 118  0 153  354   15  216
## 2075 NP_001348394.1 XP_021331255.1  42.353  170  98  0 197  366    3  172
## 2076 NP_001348394.1 XP_021331255.1  43.972  141  79  0 224  364    2  142
## 2077 NP_001348394.1 XP_021331255.1  42.609  115  66  0 252  366    2  116
## 2078 NP_001348394.1 XP_021331255.1  38.760  129  79  0 145  273   91  219
## 2079 NP_001348394.1 XP_017211059.1  41.150  226 133  0 141  366   59  284
## 2080 NP_001348394.1 XP_017211059.1  36.232  276 160  2  99  366   73  340
## 2081 NP_001348394.1 XP_017211059.1  42.593  216 124  0 153  368   99  314
## 2082 NP_001348394.1 XP_017211059.1  38.043  276 155  3  99  366  101  368
## 2083 NP_001348394.1 XP_017211059.1  42.056  214 124  0 153  366  183  396
## 2084 NP_001348394.1 XP_017211059.1  41.121  214 126  0 153  366  211  424
## 2085 NP_001348394.1 XP_021331204.1  43.925  214 120  0 153  366   99  312
## 2086 NP_001348394.1 XP_021331204.1  43.925  214 120  0 153  366  211  424
## 2087 NP_001348394.1 XP_021331204.1  38.406  276 154  2  99  366  213  480
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## 2088 NP_001348394.1 XP_021331204.1  38.406  276 154  2  99  366  241  508
## 2089 NP_001348394.1 XP_021331204.1  42.523  214 123  0 153  366  183  396
## 2090 NP_001348394.1 XP_021331204.1  41.589  214 125  0 153  366   71  284
## 2091 NP_001348394.1 XP_021331204.1  40.088  227 136  0 140  366  142  368
## 2092 NP_001348394.1 XP_021331204.1  41.589  214 125  0 153  366   43  256
## 2093 NP_001348394.1 XP_021331204.1  43.005  193 110  0 174  366    8  200
## 2094 NP_001348394.1 XP_021331204.1  38.288  222 137  0 145  366    7  228
## 2095 NP_001348394.1 XP_021331204.1  43.529  170  96  0 197  366    3  172
## 2096 NP_001348394.1 XP_021331204.1  43.455  191 108  0 153  343  323  513
## 2097 NP_001348394.1 XP_021331204.1  43.151  146  83  0 226  371    4  149
## 2098 NP_001348394.1 XP_021331204.1  43.678   87  49  0 280  366    2   88
## 2099 NP_001348394.1 XP_021331413.1  44.393  214 119  0 153  366  330  543
## 2100 NP_001348394.1 XP_021331413.1  44.860  214 118  0 153  366  246  459
## 2101 NP_001348394.1 XP_021331413.1  43.458  214 121  0 153  366  442  655
## 2102 NP_001348394.1 XP_021331413.1  36.610  295 170  5  77  366  205  487
## 2103 NP_001348394.1 XP_021331413.1  46.040  202 109  0 153  354   78  279
## 2104 NP_001348394.1 XP_021331413.1  43.458  214 121  0 153  366  134  347
## 2105 NP_001348394.1 XP_021331413.1  43.925  214 120  0 153  366   22  235
## 2106 NP_001348394.1 XP_021331413.1  45.361  194 106  0 173  366   14  207
## 2107 NP_001348394.1 XP_021331413.1  42.991  214 122  0 153  366  386  599
## 2108 NP_001348394.1 XP_021331413.1  43.925  214 120  0 153  366  302  515
## 2109 NP_001348394.1 XP_021331413.1  40.724  221 131  0 146  366  631  851
## 2110 NP_001348394.1 XP_021331413.1  41.589  214 125  0 153  366  582  795
## 2111 NP_001348394.1 XP_021331413.1  42.991  214 122  0 153  366  554  767
## 2112 NP_001348394.1 XP_021331413.1  35.314  303 179  3  69  366  449  739
## 2113 NP_001348394.1 XP_021331413.1  39.194  273 156  3  99  366  444  711
## 2114 NP_001348394.1 XP_021331413.1  42.991  214 122  0 153  366   50  263
## 2115 NP_001348394.1 XP_021331413.1  36.194  268 171  0  99  366  556  823
## 2116 NP_001348394.1 XP_021331413.1  41.589  214 125  0 153  366  414  627
## 2117 NP_001348394.1 XP_021331413.1  43.925  214 120  0 153  366  694  907
## 2118 NP_001348394.1 XP_021331413.1  41.589  214 125  0 153  366  190  403
## 2119 NP_001348394.1 XP_021331413.1  40.187  214 128  0 153  366  666  879
## 2120 NP_001348394.1 XP_021331413.1  41.573  178 104  0 189  366    2  179
## 2121 NP_001348394.1 XP_021331413.1  42.138  159  92  0 153  311  750  908
## 2122 NP_001348394.1 XP_021331413.1  43.902  123  69  0 244  366    1  123
## 2123 NP_001348394.1 XP_021327230.1  40.930  215 127  0 153  367  109  323
## 2124 NP_001348394.1 XP_021327230.1  38.494  239 142  1 128  366   61  294
## 2125 NP_001348394.1 XP_021327230.1  38.889  162  99  0 153  314  193  354
## 2126 NP_001348394.1 XP_017211312.1  40.930  215 127  0 153  367  109  323
## 2127 NP_001348394.1 XP_017211312.1  38.494  239 142  1 128  366   61  294
## 2128 NP_001348394.1 XP_017211312.1  38.889  162  99  0 153  314  193  354
## 2129 NP_001348394.1 XP_021331487.1  40.930  215 127  0 153  367  109  323
## 2130 NP_001348394.1 XP_021331487.1  38.494  239 142  1 128  366   61  294
## 2131 NP_001348394.1 XP_021331487.1  38.889  162  99  0 153  314  193  354
## 2132 NP_001348394.1 XP_021331486.1  40.930  215 127  0 153  367  109  323
## 2133 NP_001348394.1 XP_021331486.1  38.494  239 142  1 128  366   61  294
## 2134 NP_001348394.1 XP_021331486.1  38.889  162  99  0 153  314  193  354
## 2135 NP_001348394.1 XP_021331234.1  46.597  191 102  0 176  366   53  243
## 2136 NP_001348394.1 XP_021331234.1  41.250  240 140  1 130  369   36  274
## 2137 NP_001348394.1 XP_021331234.1  42.056  214 124  0 153  366   86  299
## 2138 NP_001348394.1 XP_021331234.1  44.444  180 100  0 174  353  163  342
## 2139 NP_001348394.1 XP_021331234.1  39.252  214 130  0 153  366  114  327
## 2140 NP_001348394.1 XP_021331234.1  37.443  219 137  0 148  366  165  383
## 2141 NP_001348394.1 XP_021331234.1  38.140  215 132  1 153  367  198  411
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## 2142 NP_001348394.1 XP_021331234.1  37.037  162 101  1 153  314  254  414
## 2143 NP_001348394.1 XP_017211018.1  41.518  224 127  1 143  366   37  256
## 2144 NP_001348394.1 XP_017211018.1  41.150  226 133  0 141  366   59  284
## 2145 NP_001348394.1 XP_017211018.1  41.589  214 125  0 153  366  127  340
## 2146 NP_001348394.1 XP_017211018.1  37.885  227 141  0 140  366   86  312
## 2147 NP_001348394.1 XP_017211012.2  44.393  214 119  0 153  366  183  396
## 2148 NP_001348394.1 XP_017211012.2  41.553  219 128  0 148  366  542  760
## 2149 NP_001348394.1 XP_017211012.2  43.925  214 120  0 153  366  239  452
## 2150 NP_001348394.1 XP_017211012.2  43.056  216 123  0 153  368  435  650
## 2151 NP_001348394.1 XP_017211012.2  41.176  221 130  0 146  366  680  900
## 2152 NP_001348394.1 XP_017211012.2  42.342  222 128  0 145  366  483  704
## 2153 NP_001348394.1 XP_017211012.2  42.523  214 123  0 153  366  631  844
## 2154 NP_001348394.1 XP_017211012.2  38.406  276 154  2  99  366  157  424
## 2155 NP_001348394.1 XP_017211012.2  43.925  214 120  0 153  366   71  284
## 2156 NP_001348394.1 XP_017211012.2  41.121  214 126  0 153  366  379  592
## 2157 NP_001348394.1 XP_017211012.2  37.687  268 167  0  99  366  605  872
## 2158 NP_001348394.1 XP_017211012.2  42.056  214 124  0 153  366  463  676
## 2159 NP_001348394.1 XP_017211012.2  42.991  214 122  0 153  366  267  480
## 2160 NP_001348394.1 XP_017211012.2  35.333  300 154  3  99  366  661  952
## 2161 NP_001348394.1 XP_017211012.2  42.056  214 124  0 153  366  603  816
## 2162 NP_001348394.1 XP_017211012.2  36.727  275 164  3  99  368  937 1206
## 2163 NP_001348394.1 XP_017211012.2  40.654  214 127  0 153  366  575  788
## 2164 NP_001348394.1 XP_017211012.2  42.056  214 124  0 153  366  295  508
## 2165 NP_001348394.1 XP_017211012.2  41.589  214 125  0 153  366  323  536
## 2166 NP_001348394.1 XP_017211012.2  42.523  214 123  0 153  366  127  340
## 2167 NP_001348394.1 XP_017211012.2  41.121  214 126  0 153  366  351  564
## 2168 NP_001348394.1 XP_017211012.2  40.187  214 128  0 153  366 1047 1260
## 2169 NP_001348394.1 XP_017211012.2  40.654  214 127  0 153  366   99  312
## 2170 NP_001348394.1 XP_017211012.2  42.056  214 124  0 153  366  519  732
## 2171 NP_001348394.1 XP_017211012.2  43.284  201 114  0 153  353 1103 1303
## 2172 NP_001348394.1 XP_017211012.2  40.741  216 128  0 153  368 1075 1290
## 2173 NP_001348394.1 XP_017211012.2  40.102  197 118  0 174  370 1040 1236
## 2174 NP_001348394.1 XP_017211012.2  43.455  191 108  0 176  366   66  256
## 2175 NP_001348394.1 XP_017211012.2  39.076  238 121  1 153  366  855 1092
## 2176 NP_001348394.1 XP_017211012.2  34.783  253 149  2  99  343 1077 1321
## 2177 NP_001348394.1 XP_017211012.2  39.378  193 117  0 174  366  928 1120
## 2178 NP_001348394.1 XP_017211012.2  47.445  137  72  0 232  368   66  202
## 2179 NP_001348394.1 XP_017211183.1  40.529  227 134  1 140  366   59  284
## 2180 NP_001348394.1 XP_017211183.1  41.121  214 126  0 153  366   99  312
## 2181 NP_001348394.1 XP_017211183.1  43.299  194 110  0 153  346  127  320
## 2182 NP_001348394.1 NP_001314932.1  40.088  227 136  0 140  366   86  312
## 2183 NP_001348394.1 NP_001314932.1  44.503  191 106  0 176  366   66  256
## 2184 NP_001348394.1 NP_001314932.1  42.523  214 123  0 153  366  127  340
## 2185 NP_001348394.1 NP_001314932.1  41.361  191 112  0 153  343  155  345
## 2186 NP_001348394.1 NP_001314932.1  42.424  165  95  0 202  366   64  228
## 2187 NP_001348394.1 XP_021331217.1  43.458  214 121  0 153  366  309  522
## 2188 NP_001348394.1 XP_021331217.1  41.410  227 133  0 140  366  268  494
## 2189 NP_001348394.1 XP_021331217.1  42.991  214 122  0 153  366  225  438
## 2190 NP_001348394.1 XP_021331217.1  35.870  276 161  2  99  366  115  382
## 2191 NP_001348394.1 XP_021331217.1  43.925  214 120  0 153  366  337  550
## 2192 NP_001348394.1 XP_021331217.1  37.319  276 157  2  99  366  311  578
## 2193 NP_001348394.1 XP_021331217.1  38.554  249 149  2 127  371   27  275
## 2194 NP_001348394.1 XP_021331217.1  37.549  253 142  2  99  343  339  583
## 2195 NP_001348394.1 XP_021331217.1  41.667  192 112  0 175  366  107  298
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## 2196 NP_001348394.1 XP_017211180.1  40.654  214 127  0 153  366  127  340
## 2197 NP_001348394.1 XP_017211180.1  43.455  191 108  0 176  366   66  256
## 2198 NP_001348394.1 XP_017211180.1  40.187  214 128  0 153  366  183  396
## 2199 NP_001348394.1 XP_017211180.1  41.121  214 126  0 153  366  211  424
## 2200 NP_001348394.1 XP_017211180.1  38.739  222 136  0 145  366   91  312
## 2201 NP_001348394.1 XP_017211180.1  39.252  214 130  0 153  366  155  368
## 2202 NP_001348394.1 XP_017211180.1  43.299  194 110  0 153  346  239  432
## 2203 NP_001348394.1 XP_005157357.4  41.518  224 131  0 143  366  134  357
## 2204 NP_001348394.1 XP_005157357.4  40.179  224 134  0 143  366   78  301
## 2205 NP_001348394.1 XP_005157357.4  42.991  214 122  0 153  366  284  497
## 2206 NP_001348394.1 XP_005157357.4  42.056  214 124  0 153  366  228  441
## 2207 NP_001348394.1 XP_005157357.4  41.589  214 125  0 153  366   32  245
## 2208 NP_001348394.1 XP_005157357.4  42.523  214 123  0 153  366  340  553
## 2209 NP_001348394.1 XP_005157357.4  36.101  277 161  2  99  367  202  470
## 2210 NP_001348394.1 XP_005157357.4  41.784  213 124  0 154  366  201  413
## 2211 NP_001348394.1 XP_005157357.4  40.654  214 127  0 153  366    4  217
## 2212 NP_001348394.1 XP_005157357.4  40.654  214 127  0 153  366  368  581
## 2213 NP_001348394.1 XP_005157357.4  40.654  214 127  0 153  366  172  385
## 2214 NP_001348394.1 XP_005157357.4  42.857  189 108  0 178  366    1  189
## 2215 NP_001348394.1 XP_005157357.4  41.237  194 114  0 153  346  396  589
## 2216 NP_001348394.1 XP_005157357.4  42.336  137  79  0 234  370    1  137
## 2217 NP_001348394.1 XP_017211155.1  41.518  224 127  1 143  366   37  256
## 2218 NP_001348394.1 XP_017211155.1  41.150  226 133  0 141  366   59  284
## 2219 NP_001348394.1 XP_017211155.1  41.589  214 125  0 153  366  127  340
## 2220 NP_001348394.1 XP_017211155.1  37.885  227 141  0 140  366   86  312
## 2221 NP_001348394.1 XP_017211069.1  41.518  224 127  1 143  366   37  256
## 2222 NP_001348394.1 XP_017211069.1  41.150  226 133  0 141  366   59  284
## 2223 NP_001348394.1 XP_017211069.1  42.056  214 124  0 153  366  127  340
## 2224 NP_001348394.1 XP_017211069.1  37.885  227 141  0 140  366   86  312
## 2225 NP_001348394.1 XP_009298896.2  42.035  226 131  0 143  368   62  287
## 2226 NP_001348394.1 XP_009298896.2  41.589  214 125  0 153  366  100  313
## 2227 NP_001348394.1 XP_009298896.2  38.043  276 155  3  99  366   74  341
## 2228 NP_001348394.1 XP_009298896.2  42.056  214 124  0 153  366  156  369
## 2229 NP_001348394.1 XP_009298896.2  41.121  214 126  0 153  366  184  397
## 2230 NP_001348394.1 XP_009298896.2  43.478  115  65  0 252  366   59  173
## 2231 NP_001348394.1 XP_017211125.2  41.121  214 126  0 153  366    7  220
## 2232 NP_001348394.1 XP_017211125.2  42.453  212 122  0 153  364   91  302
## 2233 NP_001348394.1 XP_017211125.2  40.187  214 128  0 153  366   35  248
## 2234 NP_001348394.1 XP_017211125.2  42.487  193 111  0 174  366   84  276
## 2235 NP_001348394.1 XP_017211125.2  42.708  192 110  0 175  366    1  192
## 2236 NP_001348394.1 XP_017211125.2  35.065   77  49  1 153  228  231  307
## 2237 NP_001348394.1 NP_001314925.1  41.589  214 125  0 153  366   71  284
## 2238 NP_001348394.1 NP_001314925.1  44.503  191 106  0 176  366   66  256
## 2239 NP_001348394.1 NP_001314925.1  42.268  194 112  0 153  346   99  292
## 2240 NP_001348394.1 NP_001314925.1  46.763  139  74  0 229  367   63  201
## 2241 NP_001348394.1 NP_001314925.1  33.333  144  80  3  99  234  157  292
## 2242 NP_001348394.1 XP_021331108.1  43.925  214 120  0 153  366  744  957
## 2243 NP_001348394.1 XP_021331108.1  43.925  214 120  0 153  366  464  677
## 2244 NP_001348394.1 XP_021331108.1  44.393  214 119  0 153  366  688  901
## 2245 NP_001348394.1 XP_021331108.1  38.235  272 160  2  99  366  298  565
## 2246 NP_001348394.1 XP_021331108.1  43.243  222 125  1 146  366  120  341
## 2247 NP_001348394.1 XP_021331108.1  35.030  334 207  2  36  366  155  481
## 2248 NP_001348394.1 XP_021331108.1  42.523  214 123  0 153  366  408  621
## 2249 NP_001348394.1 XP_021331108.1  42.056  214 124  0 153  366  520  733
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## 2250 NP_001348394.1 XP_021331108.1  39.544  263 143  2  99  353  578  832
## 2251 NP_001348394.1 XP_021331108.1  42.523  214 123  0 153  366  492  705
## 2252 NP_001348394.1 XP_021331108.1  42.523  214 123  0 153  366  604  817
## 2253 NP_001348394.1 XP_021331108.1  42.523  214 123  0 153  366  380  593
## 2254 NP_001348394.1 XP_021331108.1  40.930  215 126  1 153  366   15  229
## 2255 NP_001348394.1 XP_021331108.1  41.589  214 125  0 153  366  800 1013
## 2256 NP_001348394.1 XP_021331108.1  40.271  221 132  0 146  366  569  789
## 2257 NP_001348394.1 XP_021331108.1  39.720  214 129  0 153  366  548  761
## 2258 NP_001348394.1 XP_021331108.1  40.654  214 127  0 153  366  660  873
## 2259 NP_001348394.1 XP_021331108.1  43.814  194 108  1 174  366    8  201
## 2260 NP_001348394.1 XP_021331108.1  36.905  252 143  2  99  342  774 1017
## 2261 NP_001348394.1 XP_021331108.1  42.941  170  97  0 197  366    3  172
## 2262 NP_001348394.1 XP_021331108.1  44.242  165  92  0 153  317  856 1020
## 2263 NP_001348394.1 XP_021331108.1  46.154  143  77  0 224  366    2  144
## 2264 NP_001348394.1 NP_001314964.1  45.550  191 104  0 176  366   66  256
## 2265 NP_001348394.1 NP_001314964.1  44.737  190 105  0 153  342   71  260
## 2266 NP_001348394.1 NP_001314964.1  42.945  163  93  0 153  315   99  261
## 2267 NP_001348394.1 XP_021331282.1  36.842  304 175  3  68  366  273  564
## 2268 NP_001348394.1 XP_021331282.1  42.523  214 123  0 153  366   99  312
## 2269 NP_001348394.1 XP_021331282.1  46.073  191 103  0 176  366   66  256
## 2270 NP_001348394.1 XP_021331282.1  41.121  214 126  0 153  366  407  620
## 2271 NP_001348394.1 XP_021331282.1  43.523  193 109  0 174  366  148  340
## 2272 NP_001348394.1 XP_021331282.1  40.654  214 127  0 153  366  155  368
## 2273 NP_001348394.1 XP_021331282.1  36.101  277 161  2  98  366  184  452
## 2274 NP_001348394.1 XP_021331282.1  43.005  193 110  0 174  366  400  592
## 2275 NP_001348394.1 XP_021331282.1  40.826  218 124  1 125  342  412  624
## 2276 NP_001348394.1 XP_021331282.1  41.709  199 116  0 153  351  183  381
## 2277 NP_001348394.1 XP_021331282.1  40.654  214 127  0 153  366   71  284
## 2278 NP_001348394.1 XP_021331282.1  43.478  138  78  0 229  366   63  200
## 2279 NP_001348394.1 XP_021331131.1  37.037  270 170  0  99  368  115  384
## 2280 NP_001348394.1 XP_021331131.1  40.323  248 144  2 123  366   23  270
## 2281 NP_001348394.1 XP_021331131.1  32.870  216 145  0  99  314  171  386
## 2282 NP_001348394.1 XP_021331370.1  43.523  193 109  0 174  366    5  197
## 2283 NP_001348394.1 XP_021331370.1  41.981  212 123  0 153  364   68  279
## 2284 NP_001348394.1 XP_021331370.1  39.720  214 129  0 153  366   12  225
## 2285 NP_001348394.1 XP_021331370.1  43.005  193 110  0 174  366   61  253
## 2286 NP_001348394.1 XP_021331370.1  43.195  169  96  0 198  366    1  169
## 2287 NP_001348394.1 XP_021331370.1  35.065   77  49  1 153  228  208  284
## 2288 NP_001348394.1 XP_021326585.1  40.367  218 122  1 162  371   40  257
## 2289 NP_001348394.1 XP_021326585.1  39.796  196 118  0 153  348   67  262
## 2290 NP_001348394.1 XP_021326773.1  42.991  214 122  0 153  366  255  468
## 2291 NP_001348394.1 XP_021326773.1  43.458  214 121  0 153  366    3  216
## 2292 NP_001348394.1 XP_021326773.1  43.925  214 120  0 153  366   31  244
## 2293 NP_001348394.1 XP_021326773.1  41.204  216 127  0 153  368  171  386
## 2294 NP_001348394.1 XP_021326773.1  42.056  214 124  0 153  366   59  272
## 2295 NP_001348394.1 XP_021326773.1  40.969  227 133  1 141  366  102  328
## 2296 NP_001348394.1 XP_021326773.1  35.870  276 161  2  99  366  145  412
## 2297 NP_001348394.1 XP_021326773.1  41.589  214 125  0 153  366   87  300
## 2298 NP_001348394.1 XP_021326773.1  40.187  214 128  0 153  366  227  440
## 2299 NP_001348394.1 XP_021326773.1  40.187  214 128  0 153  366  143  356
## 2300 NP_001348394.1 XP_021326773.1  43.085  188 107  0 181  368    3  190
## 2301 NP_001348394.1 XP_021326773.1  44.654  159  88  0 208  366    2  160
## 2302 NP_001348394.1 XP_021326773.1  42.857  161  92  0 153  313  311  471
## 2303 NP_001348394.1 XP_021331401.1  43.458  214 121  0 153  366 1245 1458
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## 2304 NP_001348394.1 XP_021331401.1  43.925  214 120  0 153  366  603  816
## 2305 NP_001348394.1 XP_021331401.1  44.393  214 119  0 153  366  631  844
## 2306 NP_001348394.1 XP_021331401.1  43.458  214 121  0 153  366  295  508
## 2307 NP_001348394.1 XP_021331401.1  43.721  215 120  1 152  366  742  955
## 2308 NP_001348394.1 XP_021331401.1  42.991  214 122  0 153  366  435  648
## 2309 NP_001348394.1 XP_021331401.1  42.523  214 123  0 153  366  491  704
## 2310 NP_001348394.1 XP_021331401.1  38.768  276 153  2  99  366  521  788
## 2311 NP_001348394.1 XP_021331401.1  42.523  214 123  0 153  366  127  340
## 2312 NP_001348394.1 XP_021331401.1  37.319  276 157  2  99  366  605  872
## 2313 NP_001348394.1 XP_021331401.1  42.523  214 123  0 153  366  155  368
## 2314 NP_001348394.1 XP_021331401.1  36.957  276 156  4  99  366  885 1150
## 2315 NP_001348394.1 XP_021331401.1  42.056  214 124  0 153  366  687  900
## 2316 NP_001348394.1 XP_021331401.1  37.319  276 157  2  99  366 1219 1486
## 2317 NP_001348394.1 XP_021331401.1  41.121  214 126  0 153  366   99  312
## 2318 NP_001348394.1 XP_021331401.1  43.979  191 107  0 176  366   66  256
## 2319 NP_001348394.1 XP_021331401.1  41.121  214 126  0 153  366 1217 1430
## 2320 NP_001348394.1 XP_021331401.1  41.121  214 126  0 153  366  407  620
## 2321 NP_001348394.1 XP_021331401.1  43.979  191 107  0 176  366 1212 1402
## 2322 NP_001348394.1 XP_021331401.1  40.708  226 134  0 141  366   59  284
## 2323 NP_001348394.1 XP_021331401.1  35.870  276 161  2  99  366  465  732
## 2324 NP_001348394.1 XP_021331401.1  41.589  214 125  0 153  366  379  592
## 2325 NP_001348394.1 XP_021331401.1  40.187  214 127  1 153  366  715  927
## 2326 NP_001348394.1 XP_021331401.1  35.880  301 155  4  99  366 1247 1542
## 2327 NP_001348394.1 XP_021331401.1  39.256  242 119  1 153  366 1357 1598
## 2328 NP_001348394.1 XP_021331401.1  37.052  251 130  1 146  368 1434 1684
## 2329 NP_001348394.1 XP_021331401.1  41.121  214 126  0 153  366  183  396
## 2330 NP_001348394.1 XP_021331401.1  37.109  256 145  2  99  346 1443 1690
## 2331 NP_001348394.1 XP_021331401.1  32.931  331 177  4  69  366 1252 1570
## 2332 NP_001348394.1 XP_021331401.1  34.459  296 166  1  99  366 1359 1654
## 2333 NP_001348394.1 XP_021331401.1  39.256  242 118  3 153  366 1106 1346
## 2334 NP_001348394.1 XP_021331401.1  38.785  214 131  0 153  366 1161 1374
## 2335 NP_001348394.1 XP_021331401.1  39.252  214 130  0 153  366  239  452
## 2336 NP_001348394.1 XP_021331401.1  39.252  214 130  0 153  366  351  564
## 2337 NP_001348394.1 XP_021331401.1  42.000  200 116  0 153  352  211  410
## 2338 NP_001348394.1 XP_021331401.1  38.785  214 131  0 153  366  267  480
## 2339 NP_001348394.1 XP_021331110.1  43.056  216 123  0 153  368  285  500
## 2340 NP_001348394.1 XP_021331110.1  43.925  214 120  0 153  366  481  694
## 2341 NP_001348394.1 XP_021331110.1  36.957  276 158  2  99  366  175  442
## 2342 NP_001348394.1 XP_021331110.1  37.410  278 158  2  99  368  595  864
## 2343 NP_001348394.1 XP_021331110.1  42.523  214 123  0 153  366  593  806
## 2344 NP_001348394.1 XP_021331110.1  40.187  214 128  0 153  366  537  750
## 2345 NP_001348394.1 XP_021331110.1  42.130  216 125  0 153  368  705  920
## 2346 NP_001348394.1 XP_021331110.1  42.056  214 124  0 153  366  117  330
## 2347 NP_001348394.1 XP_021331110.1  38.007  271 162  2  99  366  623  890
## 2348 NP_001348394.1 XP_021331110.1  42.056  214 124  0 154  367   62  275
## 2349 NP_001348394.1 XP_021331110.1  41.589  214 125  0 153  366  397  610
## 2350 NP_001348394.1 XP_021331110.1  40.625  224 133  0 143  366  499  722
## 2351 NP_001348394.1 XP_021331110.1  40.654  214 127  0 153  366  453  666
## 2352 NP_001348394.1 XP_021331110.1  40.654  214 127  0 153  366  565  778
## 2353 NP_001348394.1 XP_021331110.1  40.187  214 128  0 153  366  341  554
## 2354 NP_001348394.1 XP_021331110.1  40.187  214 128  0 153  366  145  358
## 2355 NP_001348394.1 XP_021331110.1  39.252  214 130  0 153  366  173  386
## 2356 NP_001348394.1 XP_021331110.1  41.121  214 126  0 153  366  425  638
## 2357 NP_001348394.1 XP_021331110.1  41.791  201 117  0 153  353  369  569
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## 2358 NP_001348394.1 XP_021331110.1  37.729  273 160  3  99  366  679  946
## 2359 NP_001348394.1 XP_021331110.1  41.053  190 112  0 153  342  761  950
## 2360 NP_001348394.1 XP_021331110.1  24.088  137 104  0  95  231  815  951
## 2361 NP_001348394.1 XP_021327005.1  41.553  219 128  0 153  371   89  307
## 2362 NP_001348394.1 XP_021327005.1  44.615  195 108  0 172  366   52  246
## 2363 NP_001348394.1 XP_021327005.1  39.474  228 137  1 140  367   49  275
## 2364 NP_001348394.1 XP_021327005.1  43.655  197 111  0 172  368  368  564
## 2365 NP_001348394.1 XP_021327005.1  41.398  186 109  0 153  338  377  562
## 2366 NP_001348394.1 XP_021327005.1  36.667  240 124  1  99  338   91  302
## 2367 NP_001348394.1 XP_021327005.1  42.604  169  97  0 143  311  395  563
## 2368 NP_001348394.1 XP_021330544.1  41.553  219 128  0 153  371   89  307
## 2369 NP_001348394.1 XP_021330544.1  44.615  195 108  0 172  366   52  246
## 2370 NP_001348394.1 XP_021330544.1  39.474  228 137  1 140  367   49  275
## 2371 NP_001348394.1 XP_021330544.1  43.655  197 111  0 172  368  368  564
## 2372 NP_001348394.1 XP_021330544.1  41.398  186 109  0 153  338  377  562
## 2373 NP_001348394.1 XP_021330544.1  36.667  240 124  1  99  338   91  302
## 2374 NP_001348394.1 XP_021330544.1  42.604  169  97  0 143  311  395  563
## 2375 NP_001348394.1 XP_017209967.1  44.393  214 119  0 153  366  115  328
## 2376 NP_001348394.1 XP_017209967.1  40.271  221 132  0 148  368  166  386
## 2377 NP_001348394.1 XP_017209967.1  38.934  244 145  1 127  366   57  300
## 2378 NP_001348394.1 XP_017209967.1  42.857  196 112  0 173  368   79  274
## 2379 NP_001348394.1 XP_017209967.1  38.813  219 133  1 153  371  199  416
## 2380 NP_001348394.1 XP_017209967.1  33.488  215 143  0  99  313  201  415
## 2381 NP_001348394.1 XP_021331312.1  45.026  191 105  0 176  366    7  197
## 2382 NP_001348394.1 XP_021331312.1  40.529  227 135  0 140  366   27  253
## 2383 NP_001348394.1 XP_021331312.1  40.838  191 113  0 153  343   68  258
## 2384 NP_001348394.1 XP_021331312.1  43.030  165  94  0 202  366    5  169
## 2385 NP_001348394.1 XP_021331498.1  34.824  313 203  1  54  366   47  358
## 2386 NP_001348394.1 XP_021331498.1  41.176  221 130  0 148  368  252  472
## 2387 NP_001348394.1 XP_021331498.1  40.639  219 130  0 148  366  504  722
## 2388 NP_001348394.1 XP_021331498.1  42.523  214 123  0 153  366  621  834
## 2389 NP_001348394.1 XP_021331498.1  40.639  219 130  0 148  366  280  498
## 2390 NP_001348394.1 XP_021331498.1  43.458  214 121  0 153  366  733  946
## 2391 NP_001348394.1 XP_021331498.1  39.819  221 133  0 148  368  392  612
## 2392 NP_001348394.1 XP_021331498.1  40.278  216 129  0 153  368  341  556
## 2393 NP_001348394.1 XP_021331498.1  40.175  229 137  0 140  368  468  696
## 2394 NP_001348394.1 XP_021331498.1  42.986  221 125  1 134  353  629  849
## 2395 NP_001348394.1 XP_021331498.1  42.466  219 126  0 148  366  588  806
## 2396 NP_001348394.1 XP_021331498.1  39.352  216 131  0 153  368  313  528
## 2397 NP_001348394.1 XP_021331498.1  39.535  215 130  0 152  366  228  442
## 2398 NP_001348394.1 XP_021331498.1  39.720  214 129  0 153  366  201  414
## 2399 NP_001348394.1 XP_021331498.1  40.789  228 134  1 141  367  524  751
## 2400 NP_001348394.1 XP_021331498.1  40.930  215 120  1 153  360  761  975
## 2401 NP_001348394.1 XP_021331498.1  37.900  219 136  0 148  366  448  666
## 2402 NP_001348394.1 XP_021331498.1  41.589  214 125  0 153  366  425  638
## 2403 NP_001348394.1 XP_021331498.1  40.654  214 127  0 153  366  565  778
## 2404 NP_001348394.1 XP_021331498.1  40.183  219 131  0 148  366  672  890
## 2405 NP_001348394.1 XP_021331498.1  36.863  255 161  0  99  353  651  905
## 2406 NP_001348394.1 XP_021331498.1  40.299  201 120  0 153  353  789  989
## 2407 NP_001348394.1 XP_021331498.1  38.636  220 135  0 148  367  364  583
## 2408 NP_001348394.1 XP_021331498.1  40.278  216 128  1 151  366  815 1029
## 2409 NP_001348394.1 XP_021331498.1  44.242  165  91  1 153  317  873 1036
## 2410 NP_001348394.1 XP_021331498.1  36.879  141  88  1 148  288  896 1035
## 2411 NP_001348394.1 XP_021331498.1  38.462   52  32  0 317  368   85  136
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## 2412 NP_001348394.1 NP_001314928.1  41.532  248 141  1 123  366   53  300
## 2413 NP_001348394.1 NP_001314928.1  41.121  214 126  0 153  366  143  356
## 2414 NP_001348394.1 NP_001314928.1  40.529  227 135  0 140  366  102  328
## 2415 NP_001348394.1 NP_001314928.1  38.182  220 136  0 148  367  166  385
## 2416 NP_001348394.1 NP_001314928.1  42.771  166  95  0 203  368   81  246
## 2417 NP_001348394.1 NP_001314928.1  34.259  216 142  0  99  314  173  388
## 2418 NP_001348394.1 XP_017210985.1  42.922  219 125  0 148  366   82  300
## 2419 NP_001348394.1 XP_017210985.1  42.056  214 124  0 153  366  115  328
## 2420 NP_001348394.1 XP_017210985.1  42.051  195 113  0 174  368  164  358
## 2421 NP_001348394.1 XP_017210985.1  38.182  220 136  0 148  367  166  385
## 2422 NP_001348394.1 XP_017210985.1  40.385  208 124  0 159  366   65  272
## 2423 NP_001348394.1 XP_017210985.1  43.373  166  94  0 203  368   81  246
## 2424 NP_001348394.1 XP_017210985.1  32.407  216 146  0  99  314  173  388
## 2425 NP_001348394.1 XP_017210838.1  41.057  246 141  1 127  368   57  302
## 2426 NP_001348394.1 XP_017210838.1  39.367  221 134  0 148  368  194  414
## 2427 NP_001348394.1 XP_017210838.1  42.056  214 124  0 153  366  143  356
## 2428 NP_001348394.1 XP_017210838.1  38.767  227 139  0 140  366  102  328
## 2429 NP_001348394.1 XP_017210838.1  38.140  215 133  0 153  367  227  441
## 2430 NP_001348394.1 XP_017210838.1  39.320  206 125  0 148  353  166  371
## 2431 NP_001348394.1 XP_017210838.1  36.095  169 108  0 146  314  276  444
## 2432 NP_001348394.1 XP_017211108.2  39.706  272 156  3  99  366  113  380
## 2433 NP_001348394.1 XP_017211108.2  43.814  194 109  0 173  366   75  268
## 2434 NP_001348394.1 XP_017211108.2  38.115  244 147  1 127  366   53  296
## 2435 NP_001348394.1 XP_017211108.2  34.545  220 132  5  99  314  225  436
## 2436 NP_001348394.1 XP_021331434.1  37.545  277 157  2  99  367   62  330
## 2437 NP_001348394.1 XP_021331434.1  41.589  214 125  0 153  366   60  273
## 2438 NP_001348394.1 XP_021331434.1  42.056  214 124  0 153  366   32  245
## 2439 NP_001348394.1 XP_021331434.1  42.056  214 124  0 153  366    4  217
## 2440 NP_001348394.1 XP_021331434.1  45.503  189 103  0 178  366    1  189
## 2441 NP_001348394.1 XP_021331165.1  44.393  214 119  0 153  366  155  368
## 2442 NP_001348394.1 XP_021331165.1  43.458  214 121  0 153  366  211  424
## 2443 NP_001348394.1 XP_021331165.1  37.687  268 167  0  99  366   45  312
## 2444 NP_001348394.1 XP_021331165.1  42.991  214 122  0 153  366  183  396
## 2445 NP_001348394.1 XP_021331165.1  37.687  268 167  0  99  366   73  340
## 2446 NP_001348394.1 XP_021331165.1  43.256  215 122  0 153  367  632  846
## 2447 NP_001348394.1 XP_021331165.1  42.523  214 123  0 153  366  604  817
## 2448 NP_001348394.1 XP_021331165.1  41.589  214 125  0 153  366  576  789
## 2449 NP_001348394.1 XP_021331165.1  41.121  214 126  0 153  366  548  761
## 2450 NP_001348394.1 XP_021331165.1  42.523  214 123  0 153  366  239  452
## 2451 NP_001348394.1 XP_021331165.1  42.523  214 123  0 153  366  520  733
## 2452 NP_001348394.1 XP_021331165.1  43.455  191 108  0 176  366  515  705
## 2453 NP_001348394.1 XP_021331165.1  36.594  276 159  2  99  366  241  508
## 2454 NP_001348394.1 XP_021331165.1  38.326  227 140  0 140  366    2  228
## 2455 NP_001348394.1 XP_021331165.1  35.145  276 163  2  99  366  213  480
## 2456 NP_001348394.1 XP_021331165.1  41.667  120  70  0 252  371    2  121
## 2457 NP_001348394.1 XP_017211184.1  42.786  201 115  0 153  353   71  271
## 2458 NP_001348394.1 XP_017211184.1  39.720  214 129  0 153  366   43  256
## 2459 NP_001348394.1 XP_017211184.1  38.739  222 136  0 145  366    7  228
## 2460 NP_001348394.1 XP_017211184.1  43.860  171  96  0 196  366    2  172
## 2461 NP_001348394.1 XP_017211184.1  42.268  194 112  0 153  346   99  292
## 2462 NP_001348394.1 XP_021330826.1  44.103  195 109  0 174  368   48  242
## 2463 NP_001348394.1 XP_021330826.1  39.640  222 133  1 145  366   47  267
## 2464 NP_001348394.1 XP_021330826.1  42.487  193 110  1 174  366   21  212
## 2465 NP_001348394.1 XP_021330826.1  37.037   54  33  1 313  366   20   72
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## 2466 NP_001348394.1 XP_017211167.1  42.991  214 122  0 153  366   99  312
## 2467 NP_001348394.1 XP_017211167.1  46.073  191 103  0 176  366   66  256
## 2468 NP_001348394.1 XP_017211167.1  40.654  214 127  0 153  366   71  284
## 2469 NP_001348394.1 XP_017211167.1  41.117  197 116  0 148  344  122  318
## 2470 NP_001348394.1 XP_017211167.1  43.478  138  78  0 229  366   63  200
## 2471 NP_001348394.1 XP_021331047.1  37.729  273 164  2  95  366  209  476
## 2472 NP_001348394.1 XP_021331047.1  41.121  214 126  0 153  366  291  504
## 2473 NP_001348394.1 XP_021331047.1  38.655  238 122  1 153  366   43  280
## 2474 NP_001348394.1 XP_021331047.1  42.574  202 116  0 153  354  319  520
## 2475 NP_001348394.1 XP_021331047.1  41.284  218 124  1 153  366  375  592
## 2476 NP_001348394.1 XP_021331047.1  40.933  193 114  0 174  366   36  228
## 2477 NP_001348394.1 XP_021331047.1  37.143  245 130  1 146  366  176  420
## 2478 NP_001348394.1 XP_021331047.1  44.706  170  94  0 197  366    3  172
## 2479 NP_001348394.1 XP_021331047.1  43.005  193 110  0 174  366    8  200
## 2480 NP_001348394.1 XP_021331047.1  41.718  163  91  1 153  311  431  593
## 2481 NP_001348394.1 XP_021331047.1  47.126   87  46  0 280  366    2   88
## 2482 NP_001348394.1 XP_021331047.1  41.667   60  35  0 309  368    3   62
## 2483 NP_001348394.1 NP_001103336.1  36.426  291 167  3  86  366    1  283
## 2484 NP_001348394.1 NP_001103336.1  38.785  214 131  0 153  366  126  339
## 2485 NP_001348394.1 NP_001103336.1  38.182  165 102  0 153  317  182  346
## 2486 NP_001348394.1 XP_021330825.1  42.523  214 123  0 153  366  379  592
## 2487 NP_001348394.1 XP_021330825.1  46.073  191 103  0 176  366  262  452
## 2488 NP_001348394.1 XP_021330825.1  42.523  214 123  0 153  366  351  564
## 2489 NP_001348394.1 XP_021330825.1  37.979  287 160  4  90  366  258  536
## 2490 NP_001348394.1 XP_021330825.1  34.862  327 194  6  49  366  192  508
## 2491 NP_001348394.1 XP_021330825.1  42.328  189 109  0 174  362    8  196
## 2492 NP_001348394.1 XP_021330825.1  41.765  170  99  0 197  366    3  172
## 2493 NP_001348394.1 XP_021330825.1  40.000  185 111  0 153  337   15  199
## 2494 NP_001348394.1 XP_021330825.1  34.921  252 141  4  69  312  358  594
## 2495 NP_001348394.1 XP_021330825.1  30.068  296 179  3  99  366  101  396
## 2496 NP_001348394.1 XP_021330825.1  44.138  145  81  0 224  368    2  146
## 2497 NP_001348394.1 XP_021330825.1  26.549  113  73  2  95  202  489  596
## 2498 NP_001348394.1 XP_017210945.1  42.523  214 123  0 153  366  127  340
## 2499 NP_001348394.1 XP_017210945.1  40.529  227 134  1 140  366   59  284
## 2500 NP_001348394.1 XP_017210945.1  38.318  214 132  0 153  366   99  312
## 2501 NP_001348394.1 XP_021331016.1  43.781  201 113  0 153  353    6  206
## 2502 NP_001348394.1 XP_021331016.1  42.932  191 109  0 176  366    1  191
## 2503 NP_001348394.1 XP_021331016.1  39.744  156  94  0 153  308   62  217
## 2504 NP_001348394.1 XP_021331385.1  43.379  219 124  0 148  366   80  298
## 2505 NP_001348394.1 XP_021331385.1  40.359  223 133  0 148  370  136  358
## 2506 NP_001348394.1 XP_021331385.1  43.373  166  94  0 203  368   79  244
## 2507 NP_001348394.1 XP_021331385.1  32.407  216 146  0  99  314  171  386
## 2508 NP_001348394.1 XP_021331211.1  38.433  268 165  0  99  366  562  829
## 2509 NP_001348394.1 XP_021331211.1  43.458  214 121  0 153  366  420  633
## 2510 NP_001348394.1 XP_021331211.1  42.466  219 126  0 148  366  667  885
## 2511 NP_001348394.1 XP_021331211.1  41.204  216 127  0 153  368  700  915
## 2512 NP_001348394.1 XP_021331211.1  40.969  227 133  1 141  366  239  465
## 2513 NP_001348394.1 XP_021331211.1  40.529  227 134  1 141  366  491  717
## 2514 NP_001348394.1 XP_021331211.1  37.687  268 167  0  99  366  394  661
## 2515 NP_001348394.1 XP_021331211.1  42.254  213 123  0 154  366    1  213
## 2516 NP_001348394.1 XP_021331211.1  38.393  224 138  0 145  368  384  607
## 2517 NP_001348394.1 XP_021331211.1  40.187  214 128  0 153  366  336  549
## 2518 NP_001348394.1 XP_021331211.1  39.189  222 135  0 145  366  300  521
## 2519 NP_001348394.1 XP_021331211.1  40.455  220 130  1 153  371  728  947
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## 2520 NP_001348394.1 XP_021331211.1  41.121  214 126  0 153  366  168  381
## 2521 NP_001348394.1 XP_021331211.1  39.720  214 129  0 153  366   84  297
## 2522 NP_001348394.1 XP_021331211.1  40.278  216 129  0 153  368   28  243
## 2523 NP_001348394.1 XP_021331211.1  40.278  216 129  0 153  368  280  495
## 2524 NP_001348394.1 XP_021331211.1  40.654  214 127  0 153  366  644  857
## 2525 NP_001348394.1 XP_021331211.1  38.739  222 136  0 145  366   48  269
## 2526 NP_001348394.1 XP_021331211.1  41.121  214 126  0 153  366  476  689
## 2527 NP_001348394.1 XP_021331211.1  40.187  214 128  0 153  366  364  577
## 2528 NP_001348394.1 XP_021331211.1  35.586  222 143  0 145  366  132  353
## 2529 NP_001348394.1 XP_021331211.1  38.785  214 131  0 153  366  112  325
## 2530 NP_001348394.1 XP_021331211.1  39.252  214 130  0 153  366  224  437
## 2531 NP_001348394.1 XP_017211227.1  41.860  215 125  0 153  367  127  341
## 2532 NP_001348394.1 XP_017211227.1  41.589  214 125  0 153  366   99  312
## 2533 NP_001348394.1 XP_017211227.1  40.969  227 133  1 140  366   59  284
## 2534 NP_001348394.1 XP_017211227.1  42.945  163  93  0 153  315  183  345
## 2535 NP_001348394.1 NP_001107903.1  41.589  214 125  0 155  368   84  297
## 2536 NP_001348394.1 NP_001107903.1  41.667  192 112  0 175  366  160  351
## 2537 NP_001348394.1 NP_001107903.1  39.720  214 129  0 153  366  194  407
## 2538 NP_001348394.1 NP_001107903.1  38.318  214 132  0 153  366  110  323
## 2539 NP_001348394.1 NP_001107903.1  33.212  274 173  3  99  367  168  436
## 2540 NP_001348394.1 NP_001107903.1  35.802  162 104  0 153  314  278  439
## 2541 NP_001348394.1 XP_017209955.1  40.891  247 142  2 126  368   56  302
## 2542 NP_001348394.1 XP_017209955.1  38.914  221 135  0 148  368  194  414
## 2543 NP_001348394.1 XP_017209955.1  42.523  214 123  0 153  366  143  356
## 2544 NP_001348394.1 XP_017209955.1  39.648  227 137  0 140  366  102  328
## 2545 NP_001348394.1 XP_017209955.1  35.928  167 107  0 148  314  278  444
## 2546 NP_001348394.1 XP_021331415.1  42.291  227 130  1 141  366  314  540
## 2547 NP_001348394.1 XP_021331415.1  35.526  304 178  3  75  368   23  318
## 2548 NP_001348394.1 XP_021331415.1  42.991  214 122  0 153  366   19  232
## 2549 NP_001348394.1 XP_021331415.1  40.625  224 133  0 143  366  289  512
## 2550 NP_001348394.1 XP_021331415.1  43.458  214 121  0 153  366  383  596
## 2551 NP_001348394.1 XP_021331415.1  43.523  193 109  0 174  366   12  204
## 2552 NP_001348394.1 XP_021331415.1  39.720  214 129  0 153  366  159  372
## 2553 NP_001348394.1 XP_021331415.1  41.121  214 126  0 153  366  215  428
## 2554 NP_001348394.1 XP_021331415.1  40.566  212 126  0 153  364  523  734
## 2555 NP_001348394.1 XP_021331415.1  40.654  214 127  0 153  366  243  456
## 2556 NP_001348394.1 XP_021331415.1  40.278  216 129  0 153  368  131  346
## 2557 NP_001348394.1 XP_021331415.1  42.056  214 124  0 153  366  439  652
## 2558 NP_001348394.1 XP_021331415.1  42.056  214 124  0 153  366  271  484
## 2559 NP_001348394.1 XP_021331415.1  40.741  216 128  0 153  368  187  402
## 2560 NP_001348394.1 XP_021331415.1  39.252  214 130  0 153  366  495  708
## 2561 NP_001348394.1 XP_021331415.1  43.182  176 100  0 191  366    1  176
## 2562 NP_001348394.1 XP_021331415.1  38.208  212 106  2 153  342  579  787
## 2563 NP_001348394.1 XP_021331415.1  39.011  182  92  1 153  315  607  788
## 2564 NP_001348394.1 XP_017211218.1  45.641  195 106  0 172  366   62  256
## 2565 NP_001348394.1 XP_017211218.1  42.326  215 124  0 153  367   99  313
## 2566 NP_001348394.1 XP_017211218.1  41.121  214 126  0 153  366   71  284
## 2567 NP_001348394.1 XP_017211218.1  41.361  191 112  0 148  338  122  312
## 2568 NP_001348394.1 XP_017211218.1  40.491  163  97  0 153  315  155  317
## 2569 NP_001348394.1 XP_017211015.1  45.641  195 106  0 172  366   62  256
## 2570 NP_001348394.1 XP_017211015.1  42.326  215 124  0 153  367   99  313
## 2571 NP_001348394.1 XP_017211015.1  41.121  214 126  0 153  366   71  284
## 2572 NP_001348394.1 XP_017211015.1  41.361  191 112  0 148  338  122  312
## 2573 NP_001348394.1 XP_017211015.1  40.491  163  97  0 153  315  155  317
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## 2574 NP_001348394.1 XP_021331104.1  35.667  300 170  3  76  367  929 1213
## 2575 NP_001348394.1 XP_021331104.1  43.925  214 120  0 153  366  380  593
## 2576 NP_001348394.1 XP_021331104.1  39.068  279 160  2  95  368 1109 1382
## 2577 NP_001348394.1 XP_021331104.1  38.433  268 165  0  99  366 1001 1268
## 2578 NP_001348394.1 XP_021331104.1  41.589  214 125  0 153  366  352  565
## 2579 NP_001348394.1 XP_021331104.1  42.466  219 126  0 148  366  798 1016
## 2580 NP_001348394.1 XP_021331104.1  36.918  279 157  4  98  366  240  509
## 2581 NP_001348394.1 XP_021331104.1  42.056  214 124  0 153  366  831 1044
## 2582 NP_001348394.1 XP_021331104.1  38.433  268 165  0  99  366  833 1100
## 2583 NP_001348394.1 XP_021331104.1  43.119  218 119  2 153  366  492  708
## 2584 NP_001348394.1 XP_021331104.1  38.214  280 157  2  95  366  633  904
## 2585 NP_001348394.1 XP_021331104.1  36.957  276 158  2  99  366 1085 1352
## 2586 NP_001348394.1 XP_021331104.1  38.182  275 164  2  95  366  857 1128
## 2587 NP_001348394.1 XP_021331104.1  36.594  276 159  2  99  366 1029 1296
## 2588 NP_001348394.1 XP_021331104.1  44.560  193 107  0 174  366  345  537
## 2589 NP_001348394.1 XP_021331104.1  40.969  227 133  1 140  366   59  284
## 2590 NP_001348394.1 XP_021331104.1  36.630  273 163  3  99  366  917 1184
## 2591 NP_001348394.1 XP_021331104.1  42.326  215 123  1 153  366  127  341
## 2592 NP_001348394.1 XP_021331104.1  42.487  193 111  0 174  366  600  792
## 2593 NP_001348394.1 XP_021331104.1  36.957  276 161  2  99  366  550  820
## 2594 NP_001348394.1 XP_021331104.1  39.720  214 129  0 153  366  747  960
## 2595 NP_001348394.1 XP_021331104.1  40.146  137  82  0 153  289 1251 1387
## 2596 NP_001348394.1 XP_017209852.2  42.056  214 124  0 153  366   92  305
## 2597 NP_001348394.1 XP_017209852.2  41.964  224 130  0 143  366   54  277
## 2598 NP_001348394.1 XP_017209852.2  38.197  233 125  1 153  366  232  464
## 2599 NP_001348394.1 XP_017209852.2  41.584  202 118  0 153  354  120  321
## 2600 NP_001348394.1 XP_017209852.2  38.532  218 115  1 153  351  260  477
## 2601 NP_001348394.1 XP_017209852.2  37.736  212 113  2 174  366  169  380
## 2602 NP_001348394.1 XP_017209852.2  47.917  144  75  0 181  324  335  478
## 2603 NP_001348394.1 XP_017209852.2  40.000  170 102  0 197  366   52  221
## 2604 NP_001348394.1 XP_017209852.2  39.286   84  47  1 288  371   35  114
## 2605 NP_001348394.1 XP_021331302.1  42.791  215 123  0 153  367  371  585
## 2606 NP_001348394.1 XP_021331302.1  43.458  214 121  0 153  366  147  360
## 2607 NP_001348394.1 XP_021331302.1  42.056  214 124  0 153  366  287  500
## 2608 NP_001348394.1 XP_021331302.1  40.991  222 131  0 145  366   83  304
## 2609 NP_001348394.1 XP_021331302.1  42.523  214 123  0 153  366  315  528
## 2610 NP_001348394.1 XP_021331302.1  42.056  214 124  0 153  366  203  416
## 2611 NP_001348394.1 XP_021331302.1  42.991  214 122  0 153  366   35  248
## 2612 NP_001348394.1 XP_021331302.1  40.654  214 127  0 153  366    7  220
## 2613 NP_001348394.1 XP_021331302.1  41.121  214 126  0 153  366  119  332
## 2614 NP_001348394.1 XP_021331302.1  41.589  214 125  0 153  366  175  388
## 2615 NP_001348394.1 XP_021331302.1  41.121  214 126  0 153  366  231  444
## 2616 NP_001348394.1 XP_021331302.1  41.589  214 125  0 153  366  343  556
## 2617 NP_001348394.1 XP_021331302.1  40.654  214 127  0 153  366  259  472
## 2618 NP_001348394.1 XP_021331302.1  41.589  214 125  0 153  366   63  276
## 2619 NP_001348394.1 XP_021331302.1  42.188  192 111  0 175  366    1  192
## 2620 NP_001348394.1 XP_021331302.1  36.199  221 135  2  98  315  372  589
## 2621 NP_001348394.1 XP_017208296.1  42.523  214 123  0 153  366  233  446
## 2622 NP_001348394.1 XP_017208296.1  42.180  211 120  1 156  366  322  530
## 2623 NP_001348394.1 XP_017208296.1  40.187  214 128  0 153  366  373  586
## 2624 NP_001348394.1 XP_017208296.1  42.056  214 124  0 153  366   65  278
## 2625 NP_001348394.1 XP_017208296.1  41.589  214 125  0 153  366  177  390
## 2626 NP_001348394.1 XP_017208296.1  41.121  214 126  0 153  366   93  306
## 2627 NP_001348394.1 XP_017208296.1  41.146  192 113  0 177  368   61  252
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## 2628 NP_001348394.1 XP_017208296.1  40.187  214 128  0 153  366  149  362
## 2629 NP_001348394.1 XP_017208296.1  40.826  218 129  0 153  370  401  618
## 2630 NP_001348394.1 XP_017208296.1  41.040  173 102  0 194  366   50  222
## 2631 NP_001348394.1 XP_017208296.1  40.625   96  57  0 271  366   43  138
## 2632 NP_001348394.1 XP_021331475.1  42.056  214 124  0 155  368    1  214
## 2633 NP_001348394.1 XP_021331475.1  42.268  194 112  0 153  346   27  220
## 2634 NP_001348394.1 XP_021330441.1  41.589  214 125  0 153  366   69  282
## 2635 NP_001348394.1 XP_021330441.1  44.271  192 107  0 175  366   35  226
## 2636 NP_001348394.1 XP_021330441.1  42.056  214 124  0 153  366   41  254
## 2637 NP_001348394.1 XP_021330441.1  42.056  214 124  0 153  366   97  310
## 2638 NP_001348394.1 XP_021330441.1  42.021  188 109  0 179  366   11  198
## 2639 NP_001348394.1 XP_021330441.1  40.000  190 114  0 153  342  125  314
## 2640 NP_001348394.1 XP_021330441.1  42.331  163  94  0 153  315  153  315
## 2641 NP_001348394.1 XP_021323944.1  39.749  239 142  1 130  366  118  356
## 2642 NP_001348394.1 XP_021323944.1  41.518  224 131  0 143  366   49  272
## 2643 NP_001348394.1 XP_021323944.1  45.596  193 105  0 174  366  108  300
## 2644 NP_001348394.1 XP_021323944.1  42.056  214 124  0 153  366  227  440
## 2645 NP_001348394.1 XP_021323944.1  40.000  215 129  0 153  367  171  385
## 2646 NP_001348394.1 XP_021323944.1  39.720  214 129  0 153  366  199  412
## 2647 NP_001348394.1 XP_021323944.1  40.000  215 119  2 162  366    2  216
## 2648 NP_001348394.1 XP_021323944.1  35.656  244 157  0  99  342  201  444
## 2649 NP_001348394.1 XP_021323944.1  39.877  163  98  0 153  315  283  445
## 2650 NP_001348394.1 XP_017211121.2  41.860  215 125  0 153  367  116  330
## 2651 NP_001348394.1 XP_017211121.2  41.589  214 125  0 153  366   60  273
## 2652 NP_001348394.1 XP_017211121.2  40.541  222 132  0 145  366   80  301
## 2653 NP_001348394.1 XP_017211121.2  42.932  191 109  0 176  366   55  245
## 2654 NP_001348394.1 XP_017211121.2  44.172  163  91  0 153  315  172  334
## 2655 NP_001348394.1 XP_021331407.1  46.073  191 103  0 176  366  393  583
## 2656 NP_001348394.1 XP_021331407.1  41.121  214 126  0 153  366  645  858
## 2657 NP_001348394.1 XP_021331407.1  35.688  269 173  0  99  367   89  357
## 2658 NP_001348394.1 XP_021331407.1  43.523  193 109  0 174  366  638  830
## 2659 NP_001348394.1 XP_021331407.1  41.096  219 129  0 148  366   82  300
## 2660 NP_001348394.1 XP_021331407.1  40.506  237 118  2 153  366  398  634
## 2661 NP_001348394.1 XP_021331407.1  40.933  193 114  0 174  366  610  802
## 2662 NP_001348394.1 XP_021331407.1  39.720  214 129  0 153  366  673  886
## 2663 NP_001348394.1 XP_021331407.1  34.643  280 162  3  95  366  508  774
## 2664 NP_001348394.1 XP_021331407.1  38.710  217 130  1 153  366  311  527
## 2665 NP_001348394.1 XP_021331407.1  47.590  166  87  0 203  368   81  246
## 2666 NP_001348394.1 XP_021331407.1  41.361  191 112  0 153  343  701  891
## 2667 NP_001348394.1 XP_021331407.1  33.206  262 144  1 136  366  210  471
## 2668 NP_001348394.1 XP_021331407.1  36.765  204 126  1 153  353  199  402
## 2669 NP_001348394.1 XP_021331407.1  35.802   81  52  0 153  233  813  893
## 2670 NP_001348394.1 XP_017209854.1  40.000  245 143  1 126  366   56  300
## 2671 NP_001348394.1 XP_017209854.1  42.991  214 122  0 153  366  115  328
## 2672 NP_001348394.1 XP_017209854.1  38.889  216 132  0 153  368  143  358
## 2673 NP_001348394.1 XP_017209854.1  38.182  220 136  0 148  367  166  385
## 2674 NP_001348394.1 XP_017209854.1  42.771  166  95  0 203  368   81  246
## 2675 NP_001348394.1 XP_017209854.1  32.407  216 146  0  99  314  173  388
## 2676 NP_001348394.1 XP_021331331.1  36.486  296 160  2  99  366  129  424
## 2677 NP_001348394.1 XP_021331331.1  42.731  227 130  0 140  366    2  228
## 2678 NP_001348394.1 XP_021331331.1  42.056  214 124  0 153  366  267  480
## 2679 NP_001348394.1 XP_021331331.1  41.553  219 128  0 148  366   66  284
## 2680 NP_001348394.1 XP_021331331.1  38.290  269 164  2  99  366   45  312
## 2681 NP_001348394.1 XP_021331331.1  42.056  214 124  0 153  366  239  452
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## 2682 NP_001348394.1 XP_021331331.1  43.023  172  98  0 197  368    3  174
## 2683 NP_001348394.1 XP_021331331.1  36.771  223 125  2  99  313  269  483
## 2684 NP_001348394.1 XP_021331331.1  42.424   33  19  0 336  368    2   34
## 2685 NP_001348394.1 XP_021326998.1  43.925  214 120  0 153  366   61  274
## 2686 NP_001348394.1 XP_021326998.1  40.465  215 128  0 153  367  117  331
## 2687 NP_001348394.1 XP_021326998.1  41.589  214 125  0 153  366  173  386
## 2688 NP_001348394.1 XP_021326998.1  40.654  214 127  0 153  366  145  358
## 2689 NP_001348394.1 XP_021326998.1  45.550  191 104  0 176  366   56  246
## 2690 NP_001348394.1 XP_021326998.1  41.589  214 125  0 153  366   89  302
## 2691 NP_001348394.1 XP_021326998.1  41.250  160  94  0 153  312  229  388
## 2692 NP_001348394.1 XP_021326998.1  42.754  138  79  0 229  366   53  190
## 2693 NP_001348394.1 XP_021326998.1  34.409  186  94  1  99  284  231  388
## 2694 NP_001348394.1 XP_021326997.1  43.925  214 120  0 153  366   61  274
## 2695 NP_001348394.1 XP_021326997.1  40.465  215 128  0 153  367  117  331
## 2696 NP_001348394.1 XP_021326997.1  41.589  214 125  0 153  366  173  386
## 2697 NP_001348394.1 XP_021326997.1  40.654  214 127  0 153  366  145  358
## 2698 NP_001348394.1 XP_021326997.1  45.550  191 104  0 176  366   56  246
## 2699 NP_001348394.1 XP_021326997.1  41.589  214 125  0 153  366   89  302
## 2700 NP_001348394.1 XP_021326997.1  41.250  160  94  0 153  312  229  388
## 2701 NP_001348394.1 XP_021326997.1  42.754  138  79  0 229  366   53  190
## 2702 NP_001348394.1 XP_021326997.1  34.409  186  94  1  99  284  231  388
## 2703 NP_001348394.1 XP_021326996.1  43.925  214 120  0 153  366   61  274
## 2704 NP_001348394.1 XP_021326996.1  40.465  215 128  0 153  367  117  331
## 2705 NP_001348394.1 XP_021326996.1  41.589  214 125  0 153  366  173  386
## 2706 NP_001348394.1 XP_021326996.1  40.654  214 127  0 153  366  145  358
## 2707 NP_001348394.1 XP_021326996.1  45.550  191 104  0 176  366   56  246
## 2708 NP_001348394.1 XP_021326996.1  41.589  214 125  0 153  366   89  302
## 2709 NP_001348394.1 XP_021326996.1  41.250  160  94  0 153  312  229  388
## 2710 NP_001348394.1 XP_021326996.1  42.754  138  79  0 229  366   53  190
## 2711 NP_001348394.1 XP_021326996.1  34.409  186  94  1  99  284  231  388
## 2712 NP_001348394.1 XP_021326995.1  43.925  214 120  0 153  366   61  274
## 2713 NP_001348394.1 XP_021326995.1  40.465  215 128  0 153  367  117  331
## 2714 NP_001348394.1 XP_021326995.1  41.589  214 125  0 153  366  173  386
## 2715 NP_001348394.1 XP_021326995.1  40.654  214 127  0 153  366  145  358
## 2716 NP_001348394.1 XP_021326995.1  45.550  191 104  0 176  366   56  246
## 2717 NP_001348394.1 XP_021326995.1  41.589  214 125  0 153  366   89  302
## 2718 NP_001348394.1 XP_021326995.1  41.250  160  94  0 153  312  229  388
## 2719 NP_001348394.1 XP_021326995.1  42.754  138  79  0 229  366   53  190
## 2720 NP_001348394.1 XP_021326995.1  34.409  186  94  1  99  284  231  388
## 2721 NP_001348394.1 XP_021326994.1  43.925  214 120  0 153  366   61  274
## 2722 NP_001348394.1 XP_021326994.1  40.465  215 128  0 153  367  117  331
## 2723 NP_001348394.1 XP_021326994.1  41.589  214 125  0 153  366  173  386
## 2724 NP_001348394.1 XP_021326994.1  40.654  214 127  0 153  366  145  358
## 2725 NP_001348394.1 XP_021326994.1  45.550  191 104  0 176  366   56  246
## 2726 NP_001348394.1 XP_021326994.1  41.589  214 125  0 153  366   89  302
## 2727 NP_001348394.1 XP_021326994.1  41.250  160  94  0 153  312  229  388
## 2728 NP_001348394.1 XP_021326994.1  42.754  138  79  0 229  366   53  190
## 2729 NP_001348394.1 XP_021326994.1  34.409  186  94  1  99  284  231  388
## 2730 NP_001348394.1 XP_021326993.1  43.925  214 120  0 153  366   61  274
## 2731 NP_001348394.1 XP_021326993.1  40.465  215 128  0 153  367  117  331
## 2732 NP_001348394.1 XP_021326993.1  41.589  214 125  0 153  366  173  386
## 2733 NP_001348394.1 XP_021326993.1  40.654  214 127  0 153  366  145  358
## 2734 NP_001348394.1 XP_021326993.1  45.550  191 104  0 176  366   56  246
## 2735 NP_001348394.1 XP_021326993.1  41.589  214 125  0 153  366   89  302
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## 2736 NP_001348394.1 XP_021326993.1  41.250  160  94  0 153  312  229  388
## 2737 NP_001348394.1 XP_021326993.1  42.754  138  79  0 229  366   53  190
## 2738 NP_001348394.1 XP_021326993.1  34.409  186  94  1  99  284  231  388
## 2739 NP_001348394.1 XP_021330536.1  43.925  214 120  0 153  366   61  274
## 2740 NP_001348394.1 XP_021330536.1  40.465  215 128  0 153  367  117  331
## 2741 NP_001348394.1 XP_021330536.1  41.589  214 125  0 153  366  173  386
## 2742 NP_001348394.1 XP_021330536.1  40.654  214 127  0 153  366  145  358
## 2743 NP_001348394.1 XP_021330536.1  45.550  191 104  0 176  366   56  246
## 2744 NP_001348394.1 XP_021330536.1  41.589  214 125  0 153  366   89  302
## 2745 NP_001348394.1 XP_021330536.1  41.250  160  94  0 153  312  229  388
## 2746 NP_001348394.1 XP_021330536.1  42.754  138  79  0 229  366   53  190
## 2747 NP_001348394.1 XP_021330536.1  34.409  186  94  1  99  284  231  388
## 2748 NP_001348394.1 XP_021330534.1  43.925  214 120  0 153  366   61  274
## 2749 NP_001348394.1 XP_021330534.1  40.465  215 128  0 153  367  117  331
## 2750 NP_001348394.1 XP_021330534.1  41.589  214 125  0 153  366  173  386
## 2751 NP_001348394.1 XP_021330534.1  40.654  214 127  0 153  366  145  358
## 2752 NP_001348394.1 XP_021330534.1  45.550  191 104  0 176  366   56  246
## 2753 NP_001348394.1 XP_021330534.1  41.589  214 125  0 153  366   89  302
## 2754 NP_001348394.1 XP_021330534.1  41.250  160  94  0 153  312  229  388
## 2755 NP_001348394.1 XP_021330534.1  42.754  138  79  0 229  366   53  190
## 2756 NP_001348394.1 XP_021330534.1  34.409  186  94  1  99  284  231  388
## 2757 NP_001348394.1 XP_021330533.1  43.925  214 120  0 153  366   61  274
## 2758 NP_001348394.1 XP_021330533.1  40.465  215 128  0 153  367  117  331
## 2759 NP_001348394.1 XP_021330533.1  41.589  214 125  0 153  366  173  386
## 2760 NP_001348394.1 XP_021330533.1  40.654  214 127  0 153  366  145  358
## 2761 NP_001348394.1 XP_021330533.1  45.550  191 104  0 176  366   56  246
## 2762 NP_001348394.1 XP_021330533.1  41.589  214 125  0 153  366   89  302
## 2763 NP_001348394.1 XP_021330533.1  41.250  160  94  0 153  312  229  388
## 2764 NP_001348394.1 XP_021330533.1  42.754  138  79  0 229  366   53  190
## 2765 NP_001348394.1 XP_021330533.1  34.409  186  94  1  99  284  231  388
## 2766 NP_001348394.1 XP_021330532.1  43.925  214 120  0 153  366   61  274
## 2767 NP_001348394.1 XP_021330532.1  40.465  215 128  0 153  367  117  331
## 2768 NP_001348394.1 XP_021330532.1  41.589  214 125  0 153  366  173  386
## 2769 NP_001348394.1 XP_021330532.1  40.654  214 127  0 153  366  145  358
## 2770 NP_001348394.1 XP_021330532.1  45.550  191 104  0 176  366   56  246
## 2771 NP_001348394.1 XP_021330532.1  41.589  214 125  0 153  366   89  302
## 2772 NP_001348394.1 XP_021330532.1  41.250  160  94  0 153  312  229  388
## 2773 NP_001348394.1 XP_021330532.1  42.754  138  79  0 229  366   53  190
## 2774 NP_001348394.1 XP_021330532.1  34.409  186  94  1  99  284  231  388
## 2775 NP_001348394.1 XP_021330531.1  43.925  214 120  0 153  366   61  274
## 2776 NP_001348394.1 XP_021330531.1  40.465  215 128  0 153  367  117  331
## 2777 NP_001348394.1 XP_021330531.1  41.589  214 125  0 153  366  173  386
## 2778 NP_001348394.1 XP_021330531.1  40.654  214 127  0 153  366  145  358
## 2779 NP_001348394.1 XP_021330531.1  45.550  191 104  0 176  366   56  246
## 2780 NP_001348394.1 XP_021330531.1  41.589  214 125  0 153  366   89  302
## 2781 NP_001348394.1 XP_021330531.1  41.250  160  94  0 153  312  229  388
## 2782 NP_001348394.1 XP_021330531.1  42.754  138  79  0 229  366   53  190
## 2783 NP_001348394.1 XP_021330531.1  34.409  186  94  1  99  284  231  388
## 2784 NP_001348394.1 XP_021330530.1  43.925  214 120  0 153  366   61  274
## 2785 NP_001348394.1 XP_021330530.1  40.465  215 128  0 153  367  117  331
## 2786 NP_001348394.1 XP_021330530.1  41.589  214 125  0 153  366  173  386
## 2787 NP_001348394.1 XP_021330530.1  40.654  214 127  0 153  366  145  358
## 2788 NP_001348394.1 XP_021330530.1  45.550  191 104  0 176  366   56  246
## 2789 NP_001348394.1 XP_021330530.1  41.589  214 125  0 153  366   89  302
```

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## 2790 NP_001348394.1 XP_021330530.1  41.250  160  94  0 153  312  229  388
## 2791 NP_001348394.1 XP_021330530.1  42.754  138  79  0 229  366   53  190
## 2792 NP_001348394.1 XP_021330530.1  34.409  186  94  1  99  284  231  388
## 2793 NP_001348394.1 XP_017210839.1  40.984  244 140  1 127  366   57  300
## 2794 NP_001348394.1 XP_017210839.1  44.279  201 112  0 153  353  143  343
## 2795 NP_001348394.1 XP_017210839.1  39.207  227 138  0 140  366  102  328
## 2796 NP_001348394.1 XP_017210839.1  38.182  220 136  0 148  367  194  413
## 2797 NP_001348394.1 XP_017210839.1  37.104  221 139  0 148  368  166  386
## 2798 NP_001348394.1 NP_001314833.1  41.121  214 126  0 153  366  213  426
## 2799 NP_001348394.1 NP_001314833.1  41.860  215 125  0 152  366  240  454
## 2800 NP_001348394.1 NP_001314833.1  36.308  325 195  5  52  370  169  487
## 2801 NP_001348394.1 NP_001314833.1  39.496  238 141  1 129  366  164  398
## 2802 NP_001348394.1 NP_001314833.1  39.614  207 124  1 148  353  292  498
## 2803 NP_001348394.1 XP_021331376.1  41.964  224 130  0 143  366  453  676
## 2804 NP_001348394.1 XP_021331376.1  44.860  214 118  0 153  366  519  732
## 2805 NP_001348394.1 XP_021331376.1  42.601  223 128  0 146  368  120  342
## 2806 NP_001348394.1 XP_021331376.1  43.925  214 120  0 153  366  491  704
## 2807 NP_001348394.1 XP_021331376.1  47.668  193 101  0 174  366    8  200
## 2808 NP_001348394.1 XP_021331376.1  42.056  214 124  0 153  366  295  508
## 2809 NP_001348394.1 XP_021331376.1  41.981  212 123  0 153  364  659  870
## 2810 NP_001348394.1 XP_021331376.1  43.925  214 120  0 153  366  323  536
## 2811 NP_001348394.1 XP_021331376.1  40.807  223 132  0 146  368   36  258
## 2812 NP_001348394.1 XP_021331376.1  43.056  216 123  0 153  368  547  762
## 2813 NP_001348394.1 XP_021331376.1  42.791  215 123  0 152  366  602  816
## 2814 NP_001348394.1 XP_021331376.1  42.523  214 123  0 153  366  575  788
## 2815 NP_001348394.1 XP_021331376.1  38.168  262 160  2 108  368  110  370
## 2816 NP_001348394.1 XP_021331376.1  42.593  216 124  0 153  368  239  454
## 2817 NP_001348394.1 XP_021331376.1  41.121  214 126  0 153  366  351  564
## 2818 NP_001348394.1 XP_021331376.1  41.589  214 125  0 153  366  407  620
## 2819 NP_001348394.1 XP_021331376.1  34.211  304 183  4  69  366  132  424
## 2820 NP_001348394.1 XP_021331376.1  39.819  221 133  0 146  366  428  648
## 2821 NP_001348394.1 XP_021331376.1  41.256  223 131  0 146  368    8  230
## 2822 NP_001348394.1 XP_021331376.1  40.351  228 135  1 140  366  365  592
## 2823 NP_001348394.1 XP_021331376.1  40.789  228 134  1 140  366  253  480
## 2824 NP_001348394.1 XP_021331376.1  40.187  214 128  0 153  366   71  284
## 2825 NP_001348394.1 XP_021331376.1  40.187  214 128  0 153  366  631  844
## 2826 NP_001348394.1 XP_021331376.1  38.785  214 131  0 153  366   99  312
## 2827 NP_001348394.1 XP_021331376.1  45.882  170  92  0 197  366    3  172
## 2828 NP_001348394.1 XP_021331376.1  48.276  145  75  0 224  368    2  146
## 2829 NP_001348394.1 XP_021331376.1  40.127  157  94  0 153  309  715  871
## 2830 NP_001348394.1 XP_017210830.1  42.291  227 131  0 140  366  102  328
## 2831 NP_001348394.1 XP_017210830.1  39.819  221 133  0 148  368  166  386
## 2832 NP_001348394.1 XP_017210830.1  43.367  196 111  0 173  368   79  274
## 2833 NP_001348394.1 XP_017210830.1  33.488  215 143  0  99  313  201  415
## 2834 NP_001348394.1 XP_021331198.1  44.393  214 119  0 153  366  124  337
## 2835 NP_001348394.1 XP_021331198.1  43.925  214 120  0 153  366   96  309
## 2836 NP_001348394.1 XP_021331198.1  43.243  222 126  0 145  366  536  757
## 2837 NP_001348394.1 XP_021331198.1  42.991  214 122  0 153  366  572  785
## 2838 NP_001348394.1 XP_021331198.1  41.333  225 132  0 142  366    1  225
## 2839 NP_001348394.1 XP_021331198.1  42.523  214 123  0 153  366   68  281
## 2840 NP_001348394.1 XP_021331198.1  43.925  214 120  0 153  366  488  701
## 2841 NP_001348394.1 XP_021331198.1  42.523  214 123  0 153  366  628  841
## 2842 NP_001348394.1 XP_021331198.1  42.991  214 122  0 153  366  152  365
## 2843 NP_001348394.1 XP_021331198.1  42.056  214 124  0 153  366  432  645
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## 2844 NP_001348394.1 XP_021331198.1  42.991  214 122  0 153  366  516  729
## 2845 NP_001348394.1 XP_021331198.1  42.523  214 123  0 153  366  880 1093
## 2846 NP_001348394.1 XP_021331198.1  44.560  193 107  0 174  366  873 1065
## 2847 NP_001348394.1 XP_021331198.1  40.529  227 135  0 140  366   27  253
## 2848 NP_001348394.1 XP_021331198.1  42.056  214 124  0 153  366  180  393
## 2849 NP_001348394.1 XP_021331198.1  42.056  214 124  0 153  366  768  981
## 2850 NP_001348394.1 XP_021331198.1  37.313  268 168  0  99  366  406  673
## 2851 NP_001348394.1 XP_021331198.1  42.523  214 123  0 153  366  600  813
## 2852 NP_001348394.1 XP_021331198.1  42.056  214 124  0 153  366  264  477
## 2853 NP_001348394.1 XP_021331198.1  36.957  276 158  2  99  366  658  925
## 2854 NP_001348394.1 XP_021331198.1  41.121  214 126  0 153  366  404  617
## 2855 NP_001348394.1 XP_021331198.1  41.395  215 126  0 153  367  824 1038
## 2856 NP_001348394.1 XP_021331198.1  41.589  214 125  0 153  366  320  533
## 2857 NP_001348394.1 XP_021331198.1  36.232  276 160  2  99  366  182  449
## 2858 NP_001348394.1 XP_021331198.1  36.957  276 158  2  99  366  602  869
## 2859 NP_001348394.1 XP_021331198.1  41.395  215 126  0 153  367  208  422
## 2860 NP_001348394.1 XP_021331198.1  41.589  214 125  0 153  366  796 1009
## 2861 NP_001348394.1 XP_021331198.1  41.589  214 125  0 153  366  740  953
## 2862 NP_001348394.1 XP_021331198.1  40.933  193 114  0 174  366  397  589
## 2863 NP_001348394.1 XP_021331198.1  33.133  166  95  2  99  256  938 1095
## 2864 NP_001348394.1 XP_021326992.1  43.925  214 120  0 153  366   80  293
## 2865 NP_001348394.1 XP_021326992.1  40.465  215 128  0 153  367  136  350
## 2866 NP_001348394.1 XP_021326992.1  41.589  214 125  0 153  366  192  405
## 2867 NP_001348394.1 XP_021326992.1  40.654  214 127  0 153  366  164  377
## 2868 NP_001348394.1 XP_021326992.1  45.550  191 104  0 176  366   75  265
## 2869 NP_001348394.1 XP_021326992.1  41.589  214 125  0 153  366  108  321
## 2870 NP_001348394.1 XP_021326992.1  41.250  160  94  0 153  312  248  407
## 2871 NP_001348394.1 XP_021326992.1  42.754  138  79  0 229  366   72  209
## 2872 NP_001348394.1 XP_021326992.1  34.409  186  94  1  99  284  250  407
## 2873 NP_001348394.1 XP_021326991.1  43.925  214 120  0 153  366   80  293
## 2874 NP_001348394.1 XP_021326991.1  40.465  215 128  0 153  367  136  350
## 2875 NP_001348394.1 XP_021326991.1  41.589  214 125  0 153  366  192  405
## 2876 NP_001348394.1 XP_021326991.1  40.654  214 127  0 153  366  164  377
## 2877 NP_001348394.1 XP_021326991.1  45.550  191 104  0 176  366   75  265
## 2878 NP_001348394.1 XP_021326991.1  41.589  214 125  0 153  366  108  321
## 2879 NP_001348394.1 XP_021326991.1  41.250  160  94  0 153  312  248  407
## 2880 NP_001348394.1 XP_021326991.1  42.754  138  79  0 229  366   72  209
## 2881 NP_001348394.1 XP_021326991.1  34.409  186  94  1  99  284  250  407
## 2882 NP_001348394.1 XP_021326990.1  43.925  214 120  0 153  366   80  293
## 2883 NP_001348394.1 XP_021326990.1  40.465  215 128  0 153  367  136  350
## 2884 NP_001348394.1 XP_021326990.1  41.589  214 125  0 153  366  192  405
## 2885 NP_001348394.1 XP_021326990.1  40.654  214 127  0 153  366  164  377
## 2886 NP_001348394.1 XP_021326990.1  45.550  191 104  0 176  366   75  265
## 2887 NP_001348394.1 XP_021326990.1  41.589  214 125  0 153  366  108  321
## 2888 NP_001348394.1 XP_021326990.1  41.250  160  94  0 153  312  248  407
## 2889 NP_001348394.1 XP_021326990.1  42.754  138  79  0 229  366   72  209
## 2890 NP_001348394.1 XP_021326990.1  34.409  186  94  1  99  284  250  407
## 2891 NP_001348394.1 XP_021326989.1  43.925  214 120  0 153  366   80  293
## 2892 NP_001348394.1 XP_021326989.1  40.465  215 128  0 153  367  136  350
## 2893 NP_001348394.1 XP_021326989.1  41.589  214 125  0 153  366  192  405
## 2894 NP_001348394.1 XP_021326989.1  40.654  214 127  0 153  366  164  377
## 2895 NP_001348394.1 XP_021326989.1  45.550  191 104  0 176  366   75  265
## 2896 NP_001348394.1 XP_021326989.1  41.589  214 125  0 153  366  108  321
## 2897 NP_001348394.1 XP_021326989.1  41.250  160  94  0 153  312  248  407
```

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## 2898 NP_001348394.1 XP_021326989.1  42.754  138  79  0 229  366   72  209
## 2899 NP_001348394.1 XP_021326989.1  34.409  186  94  1  99  284  250  407
## 2900 NP_001348394.1 XP_021326988.1  43.925  214 120  0 153  366   80  293
## 2901 NP_001348394.1 XP_021326988.1  40.465  215 128  0 153  367  136  350
## 2902 NP_001348394.1 XP_021326988.1  41.589  214 125  0 153  366  192  405
## 2903 NP_001348394.1 XP_021326988.1  40.654  214 127  0 153  366  164  377
## 2904 NP_001348394.1 XP_021326988.1  45.550  191 104  0 176  366   75  265
## 2905 NP_001348394.1 XP_021326988.1  41.589  214 125  0 153  366  108  321
## 2906 NP_001348394.1 XP_021326988.1  41.250  160  94  0 153  312  248  407
## 2907 NP_001348394.1 XP_021326988.1  42.754  138  79  0 229  366   72  209
## 2908 NP_001348394.1 XP_021326988.1  34.409  186  94  1  99  284  250  407
## 2909 NP_001348394.1 XP_021326987.1  43.925  214 120  0 153  366   80  293
## 2910 NP_001348394.1 XP_021326987.1  40.465  215 128  0 153  367  136  350
## 2911 NP_001348394.1 XP_021326987.1  41.589  214 125  0 153  366  192  405
## 2912 NP_001348394.1 XP_021326987.1  40.654  214 127  0 153  366  164  377
## 2913 NP_001348394.1 XP_021326987.1  45.550  191 104  0 176  366   75  265
## 2914 NP_001348394.1 XP_021326987.1  41.589  214 125  0 153  366  108  321
## 2915 NP_001348394.1 XP_021326987.1  41.250  160  94  0 153  312  248  407
## 2916 NP_001348394.1 XP_021326987.1  42.754  138  79  0 229  366   72  209
## 2917 NP_001348394.1 XP_021326987.1  34.409  186  94  1  99  284  250  407
## 2918 NP_001348394.1 XP_021326986.1  43.925  214 120  0 153  366   80  293
## 2919 NP_001348394.1 XP_021326986.1  40.465  215 128  0 153  367  136  350
## 2920 NP_001348394.1 XP_021326986.1  41.589  214 125  0 153  366  192  405
## 2921 NP_001348394.1 XP_021326986.1  40.654  214 127  0 153  366  164  377
## 2922 NP_001348394.1 XP_021326986.1  45.550  191 104  0 176  366   75  265
## 2923 NP_001348394.1 XP_021326986.1  41.589  214 125  0 153  366  108  321
## 2924 NP_001348394.1 XP_021326986.1  41.250  160  94  0 153  312  248  407
## 2925 NP_001348394.1 XP_021326986.1  42.754  138  79  0 229  366   72  209
## 2926 NP_001348394.1 XP_021326986.1  34.409  186  94  1  99  284  250  407
## 2927 NP_001348394.1 XP_021330529.1  43.925  214 120  0 153  366   80  293
## 2928 NP_001348394.1 XP_021330529.1  40.465  215 128  0 153  367  136  350
## 2929 NP_001348394.1 XP_021330529.1  41.589  214 125  0 153  366  192  405
## 2930 NP_001348394.1 XP_021330529.1  40.654  214 127  0 153  366  164  377
## 2931 NP_001348394.1 XP_021330529.1  45.550  191 104  0 176  366   75  265
## 2932 NP_001348394.1 XP_021330529.1  41.589  214 125  0 153  366  108  321
## 2933 NP_001348394.1 XP_021330529.1  41.250  160  94  0 153  312  248  407
## 2934 NP_001348394.1 XP_021330529.1  42.754  138  79  0 229  366   72  209
## 2935 NP_001348394.1 XP_021330529.1  34.409  186  94  1  99  284  250  407
## 2936 NP_001348394.1 XP_021330528.1  43.925  214 120  0 153  366   80  293
## 2937 NP_001348394.1 XP_021330528.1  40.465  215 128  0 153  367  136  350
## 2938 NP_001348394.1 XP_021330528.1  41.589  214 125  0 153  366  192  405
## 2939 NP_001348394.1 XP_021330528.1  40.654  214 127  0 153  366  164  377
## 2940 NP_001348394.1 XP_021330528.1  45.550  191 104  0 176  366   75  265
## 2941 NP_001348394.1 XP_021330528.1  41.589  214 125  0 153  366  108  321
## 2942 NP_001348394.1 XP_021330528.1  41.250  160  94  0 153  312  248  407
## 2943 NP_001348394.1 XP_021330528.1  42.754  138  79  0 229  366   72  209
## 2944 NP_001348394.1 XP_021330528.1  34.409  186  94  1  99  284  250  407
## 2945 NP_001348394.1 XP_021330527.1  43.925  214 120  0 153  366   80  293
## 2946 NP_001348394.1 XP_021330527.1  40.465  215 128  0 153  367  136  350
## 2947 NP_001348394.1 XP_021330527.1  41.589  214 125  0 153  366  192  405
## 2948 NP_001348394.1 XP_021330527.1  40.654  214 127  0 153  366  164  377
## 2949 NP_001348394.1 XP_021330527.1  45.550  191 104  0 176  366   75  265
## 2950 NP_001348394.1 XP_021330527.1  41.589  214 125  0 153  366  108  321
## 2951 NP_001348394.1 XP_021330527.1  41.250  160  94  0 153  312  248  407
```

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## 2952 NP_001348394.1 XP_021330527.1  42.754  138  79  0 229  366   72  209
## 2953 NP_001348394.1 XP_021330527.1  34.409  186  94  1  99  284  250  407
## 2954 NP_001348394.1 XP_021330526.1  43.925  214 120  0 153  366   80  293
## 2955 NP_001348394.1 XP_021330526.1  40.465  215 128  0 153  367  136  350
## 2956 NP_001348394.1 XP_021330526.1  41.589  214 125  0 153  366  192  405
## 2957 NP_001348394.1 XP_021330526.1  40.654  214 127  0 153  366  164  377
## 2958 NP_001348394.1 XP_021330526.1  45.550  191 104  0 176  366   75  265
## 2959 NP_001348394.1 XP_021330526.1  41.589  214 125  0 153  366  108  321
## 2960 NP_001348394.1 XP_021330526.1  41.250  160  94  0 153  312  248  407
## 2961 NP_001348394.1 XP_021330526.1  42.754  138  79  0 229  366   72  209
## 2962 NP_001348394.1 XP_021330526.1  34.409  186  94  1  99  284  250  407
## 2963 NP_001348394.1 XP_021330525.1  43.925  214 120  0 153  366   80  293
## 2964 NP_001348394.1 XP_021330525.1  40.465  215 128  0 153  367  136  350
## 2965 NP_001348394.1 XP_021330525.1  41.589  214 125  0 153  366  192  405
## 2966 NP_001348394.1 XP_021330525.1  40.654  214 127  0 153  366  164  377
## 2967 NP_001348394.1 XP_021330525.1  45.550  191 104  0 176  366   75  265
## 2968 NP_001348394.1 XP_021330525.1  41.589  214 125  0 153  366  108  321
## 2969 NP_001348394.1 XP_021330525.1  41.250  160  94  0 153  312  248  407
## 2970 NP_001348394.1 XP_021330525.1  42.754  138  79  0 229  366   72  209
## 2971 NP_001348394.1 XP_021330525.1  34.409  186  94  1  99  284  250  407
## 2972 NP_001348394.1 XP_021330524.1  43.925  214 120  0 153  366   80  293
## 2973 NP_001348394.1 XP_021330524.1  40.465  215 128  0 153  367  136  350
## 2974 NP_001348394.1 XP_021330524.1  41.589  214 125  0 153  366  192  405
## 2975 NP_001348394.1 XP_021330524.1  40.654  214 127  0 153  366  164  377
## 2976 NP_001348394.1 XP_021330524.1  45.550  191 104  0 176  366   75  265
## 2977 NP_001348394.1 XP_021330524.1  41.589  214 125  0 153  366  108  321
## 2978 NP_001348394.1 XP_021330524.1  41.250  160  94  0 153  312  248  407
## 2979 NP_001348394.1 XP_021330524.1  42.754  138  79  0 229  366   72  209
## 2980 NP_001348394.1 XP_021330524.1  34.409  186  94  1  99  284  250  407
## 2981 NP_001348394.1 XP_021330523.1  43.925  214 120  0 153  366   80  293
## 2982 NP_001348394.1 XP_021330523.1  40.465  215 128  0 153  367  136  350
## 2983 NP_001348394.1 XP_021330523.1  41.589  214 125  0 153  366  192  405
## 2984 NP_001348394.1 XP_021330523.1  40.654  214 127  0 153  366  164  377
## 2985 NP_001348394.1 XP_021330523.1  45.550  191 104  0 176  366   75  265
## 2986 NP_001348394.1 XP_021330523.1  41.589  214 125  0 153  366  108  321
## 2987 NP_001348394.1 XP_021330523.1  41.250  160  94  0 153  312  248  407
## 2988 NP_001348394.1 XP_021330523.1  42.754  138  79  0 229  366   72  209
## 2989 NP_001348394.1 XP_021330523.1  34.409  186  94  1  99  284  250  407
## 2990 NP_001348394.1 XP_021331372.1  41.818  220 127  1 153  371   30  249
## 2991 NP_001348394.1 XP_021331372.1  40.654  214 127  0 153  366    2  215
## 2992 NP_001348394.1 XP_021331372.1  43.396  159  90  0 208  366    1  159
## 2993 NP_001348394.1 XP_021331223.1  43.836  219 123  0 148  366   80  298
## 2994 NP_001348394.1 XP_021331223.1  43.458  214 121  0 153  366  337  550
## 2995 NP_001348394.1 XP_021331223.1  41.096  219 129  0 148  366  136  354
## 2996 NP_001348394.1 XP_021331223.1  45.274  201 110  0 153  353  365  565
## 2997 NP_001348394.1 XP_021331223.1  36.567  268 170  0  99  366  171  438
## 2998 NP_001348394.1 XP_021331223.1  34.653  303 183  4  69  366  230  522
## 2999 NP_001348394.1 XP_021331223.1  43.976  166  93  0 203  368   79  244
## 3000 NP_001348394.1 XP_021331223.1  47.328  131  69  0 174  304  442  572
## 3001 NP_001348394.1 XP_009299002.1  40.486  247 143  1 126  368   56  302
## 3002 NP_001348394.1 XP_009299002.1  39.269  219 133  0 148  366  194  412
## 3003 NP_001348394.1 XP_009299002.1  42.009  219 127  0 148  366  138  356
## 3004 NP_001348394.1 XP_009299002.1  41.089  202 119  0 153  354  227  428
## 3005 NP_001348394.1 XP_009299002.1  42.778  180 103  0 174  353  192  371
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## 3006 NP_001348394.1 XP_009299002.1  40.187  214 128  0 153  366  115  328
## 3007 NP_001348394.1 XP_009299002.1  38.095  168 104  0 146  313  276  443
## 3008 NP_001348394.1 XP_021331106.1  44.393  214 119  0 153  366  575  788
## 3009 NP_001348394.1 XP_021331106.1  44.393  214 119  0 153  366  351  564
## 3010 NP_001348394.1 XP_021331106.1  43.458  214 121  0 153  366  295  508
## 3011 NP_001348394.1 XP_021331106.1  41.667  216 126  0 153  368   15  230
## 3012 NP_001348394.1 XP_021331106.1  44.041  193 108  0 174  366    8  200
## 3013 NP_001348394.1 XP_021331106.1  35.294  306 175  3  69  366  358  648
## 3014 NP_001348394.1 XP_021331106.1  42.523  214 123  0 153  366  323  536
## 3015 NP_001348394.1 XP_021331106.1  41.667  216 126  0 153  368   43  258
## 3016 NP_001348394.1 XP_021331106.1  42.523  214 123  0 153  366  491  704
## 3017 NP_001348394.1 XP_021331106.1  42.523  214 123  0 153  366  463  676
## 3018 NP_001348394.1 XP_021331106.1  43.458  214 121  0 153  366  519  732
## 3019 NP_001348394.1 XP_021331106.1  38.914  221 135  0 146  366   64  284
## 3020 NP_001348394.1 XP_021331106.1  40.090  222 133  0 145  366  203  424
## 3021 NP_001348394.1 XP_021331106.1  40.969  227 133  1 141  366  254  480
## 3022 NP_001348394.1 XP_021331106.1  36.232  276 160  2  99  366   73  340
## 3023 NP_001348394.1 XP_021331106.1  42.056  214 124  0 153  366  603  816
## 3024 NP_001348394.1 XP_021331106.1  42.056  214 124  0 153  366  659  872
## 3025 NP_001348394.1 XP_021331106.1  43.182  220 119  1 153  366  855 1074
## 3026 NP_001348394.1 XP_021331106.1  36.330  267 154  2  95  353  181  439
## 3027 NP_001348394.1 XP_021331106.1  41.121  214 126  0 153  366  155  368
## 3028 NP_001348394.1 XP_021331106.1  39.720  214 129  0 153  366  183  396
## 3029 NP_001348394.1 XP_021331106.1  45.078  193 106  0 174  366  910 1102
## 3030 NP_001348394.1 XP_021331106.1  42.523  214 123  0 153  366  917 1130
## 3031 NP_001348394.1 XP_021331106.1  44.706  170  94  0 197  366    3  172
## 3032 NP_001348394.1 XP_021331106.1  43.684  190 107  0 153  342  945 1134
## 3033 NP_001348394.1 XP_021331106.1  36.559  279 161  3  99  366  633  906
## 3034 NP_001348394.1 XP_021331106.1  46.154  143  77  0 224  366    2  144
## 3035 NP_001348394.1 XP_021331106.1  35.294   51  33  0 153  203 1085 1135
## 3036 NP_001348394.1 XP_021330576.1  42.922  219 125  0 148  366 1474 1692
## 3037 NP_001348394.1 XP_021330576.1  44.860  214 118  0 153  366 1283 1496
## 3038 NP_001348394.1 XP_021330576.1  42.991  214 122  0 153  366  387  600
## 3039 NP_001348394.1 XP_021330576.1  38.060  268 166  0  99  366 1453 1720
## 3040 NP_001348394.1 XP_021330576.1  37.795  254 148  1 113  366  301  544
## 3041 NP_001348394.1 XP_021330576.1  42.523  214 123  0 153  366  527  740
## 3042 NP_001348394.1 XP_021330576.1  37.319  276 157  2  99  366 1341 1608
## 3043 NP_001348394.1 XP_021330576.1  36.940  268 169  0  99  366  977 1244
## 3044 NP_001348394.1 XP_021330576.1  40.496  242 116  1 153  366  555  796
## 3045 NP_001348394.1 XP_021330576.1  44.560  193 107  0 174  366  772  964
## 3046 NP_001348394.1 XP_021330576.1  40.909  220 129  1 147  366  270  488
## 3047 NP_001348394.1 XP_021330576.1  35.216  301 168  4  76  366 1185 1468
## 3048 NP_001348394.1 XP_021330576.1  44.560  193 107  0 174  366 1444 1636
## 3049 NP_001348394.1 XP_021330576.1  37.313  268 168  0  99  366  669  936
## 3050 NP_001348394.1 XP_021330576.1  42.523  214 123  0 153  366  611  824
## 3051 NP_001348394.1 XP_021330576.1  42.466  219 126  0 148  366 1166 1384
## 3052 NP_001348394.1 XP_021330576.1  42.056  214 124  0 153  366  443  656
## 3053 NP_001348394.1 XP_021330576.1  42.991  214 122  0 153  366 1311 1524
## 3054 NP_001348394.1 XP_021330576.1  38.431  255 157  0  99  353 1033 1287
## 3055 NP_001348394.1 XP_021330576.1  42.289  201 116  0 153  353  499  699
## 3056 NP_001348394.1 XP_021330576.1  37.313  268 168  0  99  366  725  992
## 3057 NP_001348394.1 XP_021330576.1  42.523  214 123  0 153  366 1563 1776
## 3058 NP_001348394.1 XP_021330576.1  39.207  227 138  0 140  366   39  265
## 3059 NP_001348394.1 XP_021330576.1  42.056  214 124  0 153  366 1143 1356
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## 3060 NP_001348394.1 XP_021330576.1  41.589  214 125  0 153  366  667  880
## 3061 NP_001348394.1 XP_021330576.1  40.654  214 127  0 153  366  471  684
## 3062 NP_001348394.1 XP_021330576.1  41.589  214 125  0 153  366  919 1132
## 3063 NP_001348394.1 XP_021330576.1  42.056  214 124  0 153  366 1339 1552
## 3064 NP_001348394.1 XP_021330576.1  43.284  201 114  0 153  353  807 1007
## 3065 NP_001348394.1 XP_021330576.1  41.121  214 126  0 153  366 1535 1748
## 3066 NP_001348394.1 XP_021330576.1  36.957  276 158  2  99  366 1145 1412
## 3067 NP_001348394.1 XP_021330576.1  41.121  214 126  0 153  366 1115 1328
## 3068 NP_001348394.1 XP_021330576.1  40.930  215 127  0 153  367  975 1189
## 3069 NP_001348394.1 XP_021330576.1  35.507  276 162  2  99  366  837 1104
## 3070 NP_001348394.1 XP_021330576.1  36.404  228 145  0 140  367   67  294
## 3071 NP_001348394.1 XP_021330576.1  39.815  216 126  2 153  366  639  852
## 3072 NP_001348394.1 XP_021330576.1  33.443  305 172  7  74  366  875 1160
## 3073 NP_001348394.1 XP_021330576.1  38.318  214 131  1 153  366  108  320
## 3074 NP_001348394.1 XP_021330576.1  40.838  191 113  0 153  343 1591 1781
## 3075 NP_001348394.1 XP_021330576.1  43.571  140  79  0 232  371   47  186
## 3076 NP_001348394.1 XP_017210610.1  40.654  214 127  0 153  366   68  281
## 3077 NP_001348394.1 XP_017210610.1  40.969  227 133  1 140  366   28  253
## 3078 NP_001348394.1 XP_017210610.1  40.654  214 127  0 153  366  124  337
## 3079 NP_001348394.1 XP_017210610.1  39.252  214 130  0 153  366   96  309
## 3080 NP_001348394.1 XP_017210610.1  43.125  160  91  0 153  312  180  339
## 3081 NP_001348394.1 XP_021331133.1  41.589  214 125  0 153  366   99  312
## 3082 NP_001348394.1 XP_021331133.1  41.315  213 125  0 154  366   72  284
## 3083 NP_001348394.1 XP_021331133.1  39.720  214 129  0 153  366  127  340
## 3084 NP_001348394.1 XP_021331133.1  44.503  191 106  0 176  366   66  256
## 3085 NP_001348394.1 XP_021331133.1  40.796  201 119  0 153  353  155  355
## 3086 NP_001348394.1 XP_021331133.1  42.754  138  79  0 229  366   63  200
## 3087 NP_001348394.1 XP_021331133.1  37.162  148  93  0 153  300  211  358
## 3088 NP_001348394.1 XP_021331133.1  35.632   87  56  0 280  366   58  144
## 3089 NP_001348394.1 XP_017210035.1  39.592  245 144  1 126  366   56  300
## 3090 NP_001348394.1 XP_017210035.1  38.914  221 135  0 148  368  138  358
## 3091 NP_001348394.1 XP_017210035.1  42.056  214 124  0 153  366  115  328
## 3092 NP_001348394.1 XP_017210035.1  38.182  220 136  0 148  367  166  385
## 3093 NP_001348394.1 XP_017210035.1  43.373  166  94  0 203  368   81  246
## 3094 NP_001348394.1 XP_017210035.1  33.333  216 144  0  99  314  173  388
## 3095 NP_001348394.1 XP_021331014.1  42.056  214 124  0 153  366  203  416
## 3096 NP_001348394.1 XP_021331014.1  42.009  219 127  0 148  366  254  472
## 3097 NP_001348394.1 XP_021331014.1  37.743  257 160  0 110  366   76  332
## 3098 NP_001348394.1 XP_021331014.1  36.331  278 160  3  99  368  233  501
## 3099 NP_001348394.1 XP_021331014.1  37.313  268 168  0  99  366  121  388
## 3100 NP_001348394.1 XP_021331014.1  37.313  268 168  0  99  366  177  444
## 3101 NP_001348394.1 XP_021331014.1  40.789  228 134  1 140  367   51  277
## 3102 NP_001348394.1 XP_021331014.1  37.891  256 142  3  99  346  261  507
## 3103 NP_001348394.1 XP_021331014.1  44.848  165  91  0 204  368   58  222
## 3104 NP_001348394.1 XP_021331122.1  41.589  214 125  0 153  366  342  555
## 3105 NP_001348394.1 XP_021331122.1  43.256  215 121  1 153  366  313  527
## 3106 NP_001348394.1 XP_021331122.1  41.518  224 130  1 131  353   94  317
## 3107 NP_001348394.1 XP_021331122.1  42.523  214 123  0 153  366   61  274
## 3108 NP_001348394.1 XP_021331122.1  41.121  214 126  0 153  366   89  302
## 3109 NP_001348394.1 XP_021331122.1  42.932  191 109  0 176  366   56  246
## 3110 NP_001348394.1 XP_021331122.1  42.051  195 113  0 148  342  365  559
## 3111 NP_001348394.1 XP_021331122.1  44.928  138  76  0 229  366   53  190
## 3112 NP_001348394.1 XP_021331025.1  40.654  214 127  0 153  366   45  258
## 3113 NP_001348394.1 XP_021331025.1  39.252  214 130  0 153  366   73  286
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## 3114 NP_001348394.1 XP_021331025.1  39.171  217 132  0 150  366   14  230
## 3115 NP_001348394.1 XP_021331025.1  38.249  217 131  1 153  366  129  345
## 3116 NP_001348394.1 XP_021331025.1  38.318  214 132  0 153  366  101  314
## 3117 NP_001348394.1 XP_021331025.1  41.243  177 101  1 153  326  185  361
## 3118 NP_001348394.1 XP_021329631.1  45.361  194 106  0 174  367   53  246
## 3119 NP_001348394.1 XP_021329631.1  41.589  214 125  0 153  366   60  273
## 3120 NP_001348394.1 XP_021329631.1  44.118  170  95  0 197  366   48  217
## 3121 NP_001348394.1 XP_021329631.1  40.952  210 124  0 153  362  116  325
## 3122 NP_001348394.1 XP_021331041.1  41.121  214 126  0 153  366  155  368
## 3123 NP_001348394.1 XP_021331041.1  35.315  286 170  2  81  366   70  340
## 3124 NP_001348394.1 XP_021331041.1  40.187  214 128  0 153  366  183  396
## 3125 NP_001348394.1 XP_021331041.1  41.294  201 118  0 153  353  211  411
## 3126 NP_001348394.1 XP_021331041.1  41.436  181 106  0 145  325  231  411
## 3127 NP_001348394.1 NP_001104669.1  42.523  214 123  0 153  366  142  355
## 3128 NP_001348394.1 NP_001104669.1  38.710  248 148  2 123  366   52  299
## 3129 NP_001348394.1 NP_001104669.1  41.451  193 113  0 174  366  135  327
## 3130 NP_001348394.1 NP_001104669.1  41.237  194 114  0 176  369   81  274
## 3131 NP_001348394.1 NP_001104669.1  37.674  215 134  0 153  367  198  412
## 3132 NP_001348394.1 NP_001104669.1  33.036  224 134  3  99  314  200  415
## 3133 NP_001348394.1 XP_017210573.1  42.523  214 123  0 153  366  142  355
## 3134 NP_001348394.1 XP_017210573.1  38.710  248 148  2 123  366   52  299
## 3135 NP_001348394.1 XP_017210573.1  41.451  193 113  0 174  366  135  327
## 3136 NP_001348394.1 XP_017210573.1  41.237  194 114  0 176  369   81  274
## 3137 NP_001348394.1 XP_017210573.1  37.674  215 134  0 153  367  198  412
## 3138 NP_001348394.1 XP_017210573.1  33.036  224 134  3  99  314  200  415
## 3139 NP_001348394.1 XP_017210986.1  43.269  208 118  0 159  366   65  272
## 3140 NP_001348394.1 XP_017210986.1  40.000  220 132  0 148  367  138  357
## 3141 NP_001348394.1 XP_017210986.1  41.553  219 128  0 148  366   82  300
## 3142 NP_001348394.1 XP_017210986.1  40.513  195 116  0 174  368  136  330
## 3143 NP_001348394.1 XP_017210986.1  46.715  137  73  0 232  368   82  218
## 3144 NP_001348394.1 XP_017210986.1  37.037  162 102  0 153  314  199  360
## 3145 NP_001348394.1 XP_021326715.1  41.589  214 125  0 153  366  142  355
## 3146 NP_001348394.1 XP_021326715.1  42.326  215 124  0 153  367  198  412
## 3147 NP_001348394.1 XP_021326715.1  42.056  214 124  0 153  366  170  383
## 3148 NP_001348394.1 XP_021326715.1  41.121  214 126  0 153  366  114  327
## 3149 NP_001348394.1 XP_021326715.1  39.823  226 136  0 141  366   46  271
## 3150 NP_001348394.1 XP_021326715.1  42.056  214 124  0 153  366   86  299
## 3151 NP_001348394.1 XP_021327374.1  42.130  216 125  0 153  368  450  665
## 3152 NP_001348394.1 XP_021327374.1  39.648  227 137  0 140  366  297  523
## 3153 NP_001348394.1 XP_021327374.1  42.523  214 123  0 153  366  394  607
## 3154 NP_001348394.1 XP_021327374.1  40.654  214 127  0 153  366  114  327
## 3155 NP_001348394.1 XP_021327374.1  42.523  214 123  0 153  366  366  579
## 3156 NP_001348394.1 XP_021327374.1  40.187  214 128  0 153  366  282  495
## 3157 NP_001348394.1 XP_021327374.1  40.187  214 128  0 153  366   58  271
## 3158 NP_001348394.1 XP_021327374.1  34.409  279 167  2  96  366  169  439
## 3159 NP_001348394.1 XP_021327374.1  40.187  214 128  0 153  366  338  551
## 3160 NP_001348394.1 XP_021327374.1  40.187  214 128  0 153  366   30  243
## 3161 NP_001348394.1 XP_021327374.1  38.785  214 131  0 153  366  506  719
## 3162 NP_001348394.1 XP_021327374.1  42.408  191 110  0 176  366   25  215
## 3163 NP_001348394.1 XP_021327374.1  38.647  207 127  0 162  368  543  749
## 3164 NP_001348394.1 XP_021327374.1  36.220  127  81  0 242  368    7  133
## 3165 NP_001348394.1 XP_021327374.1  36.486   74  43  1 299  368    4   77
## 3166 NP_001348394.1 XP_021327374.1  30.682   88  61  0 140  227  661  748
## 3167 NP_001348394.1 XP_021331130.1  42.922  219 125  0 148  366   82  300
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## 3168 NP_001348394.1 XP_021331130.1  40.271  221 132  0 148  368  138  358
## 3169 NP_001348394.1 XP_021331130.1  41.121  214 126  0 153  366  115  328
## 3170 NP_001348394.1 XP_021331130.1  40.865  208 123  0 159  366   65  272
## 3171 NP_001348394.1 XP_021331130.1  38.605  215 132  0 153  367  171  385
## 3172 NP_001348394.1 XP_021331130.1  43.976  166  93  0 203  368   81  246
## 3173 NP_001348394.1 XP_021331130.1  32.407  216 146  0  99  314  173  388
## 3174 NP_001348394.1 XP_021327368.1  43.979  191 107  0 176  366   19  209
## 3175 NP_001348394.1 XP_021327368.1  40.741  216 128  0 153  368   24  239
## 3176 NP_001348394.1 XP_021327368.1  42.056  214 124  0 153  366  108  321
## 3177 NP_001348394.1 XP_021327368.1  40.187  214 128  0 153  366   52  265
## 3178 NP_001348394.1 XP_021327368.1  32.967   91  61  0 140  230  235  325
## 3179 NP_001348394.1 XP_021332373.1  43.979  191 107  0 176  366   19  209
## 3180 NP_001348394.1 XP_021332373.1  40.741  216 128  0 153  368   24  239
## 3181 NP_001348394.1 XP_021332373.1  42.056  214 124  0 153  366  108  321
## 3182 NP_001348394.1 XP_021332373.1  40.187  214 128  0 153  366   52  265
## 3183 NP_001348394.1 XP_021332373.1  32.967   91  61  0 140  230  235  325
## 3184 NP_001348394.1 XP_021331304.1  39.207  227 138  0 140  366    2  228
## 3185 NP_001348394.1 XP_021331304.1  40.187  214 128  0 153  366   71  284
## 3186 NP_001348394.1 XP_021331304.1  42.523  214 123  0 153  366  127  340
## 3187 NP_001348394.1 XP_021331304.1  39.419  241 133  1 139  366  128  368
## 3188 NP_001348394.1 XP_021331304.1  41.589  214 125  0 153  366  183  396
## 3189 NP_001348394.1 XP_021331304.1  41.589  214 125  0 153  366   99  312
## 3190 NP_001348394.1 XP_021331304.1  41.451  193 113  0 174  366   64  256
## 3191 NP_001348394.1 XP_021331304.1  36.771  223 125  2  99  313  185  399
## 3192 NP_001348394.1 XP_021329615.1  42.523  214 123  0 153  366   56  269
## 3193 NP_001348394.1 XP_021329615.1  38.938  226 138  0 146  371  189  414
## 3194 NP_001348394.1 XP_021329615.1  41.667  216 126  0 153  368  168  383
## 3195 NP_001348394.1 XP_021329615.1  42.056  214 124  0 153  366  140  353
## 3196 NP_001348394.1 XP_021329615.1  42.326  215 124  0 153  367   84  298
## 3197 NP_001348394.1 XP_021329615.1  40.654  214 127  0 153  366  112  325
## 3198 NP_001348394.1 XP_021329615.1  42.932  191 109  0 176  366   51  241
## 3199 NP_001348394.1 XP_021330824.1  40.724  221 131  0 148  368  152  372
## 3200 NP_001348394.1 XP_021330824.1  41.453  234 136  1 134  366   81  314
## 3201 NP_001348394.1 XP_021330824.1  41.553  219 128  0 148  366   68  286
## 3202 NP_001348394.1 XP_021330824.1  45.000  180  99  0 174  353  150  329
## 3203 NP_001348394.1 XP_021330824.1  41.327  196 115  0 173  368   65  260
## 3204 NP_001348394.1 XP_021330824.1  33.171  205 137  0 110  314  198  402
## 3205 NP_001348394.1 NP_001025341.1  42.396  217 124  1 153  369  195  410
## 3206 NP_001348394.1 NP_001025341.1  35.656  244 156  1 123  366   53  295
## 3207 NP_001348394.1 NP_001025341.1  40.206  194 116  0 174  367   76  269
## 3208 NP_001348394.1 NP_001025341.1  39.645  169 100  2 153  320  251  418
## 3209 NP_001348394.1 NP_001025341.1  29.630  108  75  1 148  254  329  436
## 3210 NP_001348394.1 XP_021331384.1  40.359  223 133  0 148  370  164  386
## 3211 NP_001348394.1 XP_021331384.1  43.458  214 121  0 153  366  113  326
## 3212 NP_001348394.1 XP_021331384.1  41.096  219 129  0 148  366   80  298
## 3213 NP_001348394.1 XP_021331384.1  43.005  193 110  0 174  366  162  354
## 3214 NP_001348394.1 XP_021331384.1  41.327  196 115  0 173  368   77  272
## 3215 NP_001348394.1 XP_021331384.1  32.407  216 146  0  99  314  199  414
## 3216 NP_001348394.1 XP_021330462.1  38.554  249 145  1 118  366  124  364
## 3217 NP_001348394.1 XP_021330462.1  42.056  214 124  0 153  366  123  336
## 3218 NP_001348394.1 XP_021330462.1  40.654  214 127  0 153  366  179  392
## 3219 NP_001348394.1 XP_021330462.1  42.289  201 116  0 153  353  207  407
## 3220 NP_001348394.1 XP_021330462.1  40.654  214 127  0 153  366   95  308
## 3221 NP_001348394.1 XP_021330462.1  39.207  227 137  1 141  366  222  448
```

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## 3222 NP_001348394.1 XP_021330462.1  43.005  193 110  0 174  366   88  280
## 3223 NP_001348394.1 XP_021330462.1  39.252  214 130  0 153  366  263  476
## 3224 NP_001348394.1 XP_021330462.1  42.045  176 102  0 191  366   77  252
## 3225 NP_001348394.1 XP_021330462.1  36.916  214 135  0 153  366  291  504
## 3226 NP_001348394.1 XP_021330462.1  41.935  155  90  0 214  368   72  226
## 3227 NP_001348394.1 XP_021330462.1  35.000  240 156  0  99  338  293  532
## 3228 NP_001348394.1 XP_021330461.1  38.554  249 145  1 118  366  124  364
## 3229 NP_001348394.1 XP_021330461.1  42.056  214 124  0 153  366  123  336
## 3230 NP_001348394.1 XP_021330461.1  40.654  214 127  0 153  366  179  392
## 3231 NP_001348394.1 XP_021330461.1  42.289  201 116  0 153  353  207  407
## 3232 NP_001348394.1 XP_021330461.1  40.654  214 127  0 153  366   95  308
## 3233 NP_001348394.1 XP_021330461.1  39.207  227 137  1 141  366  222  448
## 3234 NP_001348394.1 XP_021330461.1  43.005  193 110  0 174  366   88  280
## 3235 NP_001348394.1 XP_021330461.1  39.252  214 130  0 153  366  263  476
## 3236 NP_001348394.1 XP_021330461.1  42.045  176 102  0 191  366   77  252
## 3237 NP_001348394.1 XP_021330461.1  36.916  214 135  0 153  366  291  504
## 3238 NP_001348394.1 XP_021330461.1  41.935  155  90  0 214  368   72  226
## 3239 NP_001348394.1 XP_021330461.1  35.000  240 156  0  99  338  293  532
## 3240 NP_001348394.1 XP_021330460.1  38.554  249 145  1 118  366  124  364
## 3241 NP_001348394.1 XP_021330460.1  42.056  214 124  0 153  366  123  336
## 3242 NP_001348394.1 XP_021330460.1  40.654  214 127  0 153  366  179  392
## 3243 NP_001348394.1 XP_021330460.1  42.289  201 116  0 153  353  207  407
## 3244 NP_001348394.1 XP_021330460.1  40.654  214 127  0 153  366   95  308
## 3245 NP_001348394.1 XP_021330460.1  39.207  227 137  1 141  366  222  448
## 3246 NP_001348394.1 XP_021330460.1  43.005  193 110  0 174  366   88  280
## 3247 NP_001348394.1 XP_021330460.1  39.252  214 130  0 153  366  263  476
## 3248 NP_001348394.1 XP_021330460.1  42.045  176 102  0 191  366   77  252
## 3249 NP_001348394.1 XP_021330460.1  36.916  214 135  0 153  366  291  504
## 3250 NP_001348394.1 XP_021330460.1  41.935  155  90  0 214  368   72  226
## 3251 NP_001348394.1 XP_021330460.1  35.000  240 156  0  99  338  293  532
## 3252 NP_001348394.1 XP_009301951.2  39.720  214 129  0 153  366  129  342
## 3253 NP_001348394.1 XP_009301951.2  39.175  194 118  0 174  367  206  399
## 3254 NP_001348394.1 XP_009301951.2  33.846  260 170  2 107  366   29  286
## 3255 NP_001348394.1 XP_009301951.2  35.510  245 158  0 126  370   74  318
## 3256 NP_001348394.1 XP_009301951.2  40.415  193 115  0 153  345  213  405
## 3257 NP_001348394.1 XP_009301951.2  32.727   55  37  0 151  205  351  405
## 3258 NP_001348394.1 XP_021331158.1  40.991  222 131  0 145  366   34  255
## 3259 NP_001348394.1 XP_021331158.1  43.925  214 120  0 153  366   70  283
## 3260 NP_001348394.1 XP_021331158.1  43.056  216 123  0 153  368  238  453
## 3261 NP_001348394.1 XP_021331158.1  41.589  214 125  0 153  366   98  311
## 3262 NP_001348394.1 XP_021331158.1  44.509  173  96  0 174  346  315  487
## 3263 NP_001348394.1 XP_021331158.1  42.487  193 110  1 174  366    8  199
## 3264 NP_001348394.1 XP_021331158.1  34.333  300 161  3  99  366  100  395
## 3265 NP_001348394.1 XP_021331158.1  33.129  326 167  5  77  366  113  423
## 3266 NP_001348394.1 XP_021331158.1  42.353  170  97  1 197  366    3  171
## 3267 NP_001348394.1 XP_021331158.1  42.373   59  33  1 308  366    2   59
## 3268 NP_001348394.1 XP_021330457.1  43.523  193 109  0 174  366    8  200
## 3269 NP_001348394.1 XP_021330457.1  41.121  214 126  0 153  366   43  256
## 3270 NP_001348394.1 XP_021330457.1  41.294  201 118  0 153  353   15  215
## 3271 NP_001348394.1 XP_021330457.1  44.118  170  95  0 197  366    3  172
## 3272 NP_001348394.1 XP_021330457.1  35.950  242 127  1 153  366   99  340
## 3273 NP_001348394.1 XP_021330457.1  36.916  214 135  0 153  366  155  368
## 3274 NP_001348394.1 XP_021330457.1  37.383  214 134  0 153  366   71  284
## 3275 NP_001348394.1 XP_021330457.1  40.741  162  96  0 153  314  211  372
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## 3276 NP_001348394.1 XP_021330457.1  45.977   87  47  0 280  366    2   88
## 3277 NP_001348394.1 XP_021330457.1  31.250  192 124  3  99  286  185  372
## 3278 NP_001348394.1 XP_021330456.1  43.523  193 109  0 174  366    8  200
## 3279 NP_001348394.1 XP_021330456.1  41.121  214 126  0 153  366   43  256
## 3280 NP_001348394.1 XP_021330456.1  41.294  201 118  0 153  353   15  215
## 3281 NP_001348394.1 XP_021330456.1  44.118  170  95  0 197  366    3  172
## 3282 NP_001348394.1 XP_021330456.1  35.950  242 127  1 153  366   99  340
## 3283 NP_001348394.1 XP_021330456.1  36.916  214 135  0 153  366  155  368
## 3284 NP_001348394.1 XP_021330456.1  37.383  214 134  0 153  366   71  284
## 3285 NP_001348394.1 XP_021330456.1  40.741  162  96  0 153  314  211  372
## 3286 NP_001348394.1 XP_021330456.1  45.977   87  47  0 280  366    2   88
## 3287 NP_001348394.1 XP_021330456.1  31.250  192 124  3  99  286  185  372
## 3288 NP_001348394.1 XP_021331396.1  42.932  191 108  1 182  371    1  191
## 3289 NP_001348394.1 XP_021331396.1  43.023  172  98  0 154  325    1  172
## 3290 NP_001348394.1 XP_021331396.1  39.610  154  93  0 153  306   28  181
## 3291 NP_001348394.1 XP_021331169.1  40.625  224 133  0 143  366    5  228
## 3292 NP_001348394.1 XP_021331169.1  39.732  224 135  0 143  366  173  396
## 3293 NP_001348394.1 XP_021331169.1  43.925  214 120  0 153  366  295  508
## 3294 NP_001348394.1 XP_021331169.1  42.523  214 123  0 153  366   71  284
## 3295 NP_001348394.1 XP_021331169.1  42.991  214 122  0 153  366  379  592
## 3296 NP_001348394.1 XP_021331169.1  41.121  214 126  0 153  366  127  340
## 3297 NP_001348394.1 XP_021331169.1  46.512  172  92  0 197  368    3  174
## 3298 NP_001348394.1 XP_021331169.1  41.204  216 127  0 153  368   99  314
## 3299 NP_001348394.1 XP_021331169.1  40.187  214 128  0 153  366  435  648
## 3300 NP_001348394.1 XP_021331169.1  43.005  193 110  0 174  366  428  620
## 3301 NP_001348394.1 XP_021331169.1  43.523  193 109  0 174  366  288  480
## 3302 NP_001348394.1 XP_021331169.1  42.523  214 123  0 153  366  351  564
## 3303 NP_001348394.1 XP_021331169.1  40.187  214 128  0 153  366  155  368
## 3304 NP_001348394.1 XP_021331169.1  40.179  224 134  0 143  366  313  536
## 3305 NP_001348394.1 XP_021331169.1  37.313  268 168  0  99  366  185  452
## 3306 NP_001348394.1 XP_021331169.1  42.786  201 115  0 153  353  463  663
## 3307 NP_001348394.1 XP_021331169.1  41.209  182 107  0 153  334  491  672
## 3308 NP_001348394.1 XP_021331169.1  40.491  163  97  0 153  315  519  681
## 3309 NP_001348394.1 XP_021331169.1  42.529   87  50  0 280  366    2   88
## 3310 NP_001348394.1 XP_021331032.1  41.860  215 125  0 153  367   69  283
## 3311 NP_001348394.1 XP_021331032.1  41.589  214 125  0 153  366  181  394
## 3312 NP_001348394.1 XP_021331032.1  43.458  214 121  0 153  366  293  506
## 3313 NP_001348394.1 XP_021331032.1  43.519  216 122  0 153  368  237  452
## 3314 NP_001348394.1 XP_021331032.1  41.981  212 123  0 153  364  377  588
## 3315 NP_001348394.1 XP_021331032.1  41.121  214 126  0 153  366   97  310
## 3316 NP_001348394.1 XP_021331032.1  37.692  260 146  2  99  350  155  406
## 3317 NP_001348394.1 XP_021331032.1  41.121  214 126  0 153  366  125  338
## 3318 NP_001348394.1 XP_021331032.1  43.455  191 108  0 176  366   64  254
## 3319 NP_001348394.1 XP_021331032.1  41.589  214 125  0 153  366  265  478
## 3320 NP_001348394.1 XP_021331032.1  39.720  214 129  0 153  366  349  562
## 3321 NP_001348394.1 XP_021331032.1  40.930  215 127  0 152  366  320  534
## 3322 NP_001348394.1 XP_021331032.1  41.038  212 106  2 174  366  426  637
## 3323 NP_001348394.1 XP_021331032.1  41.038  212 100  2 153  342  433  641
## 3324 NP_001348394.1 XP_017211076.1  39.184  245 145  1 126  366   56  300
## 3325 NP_001348394.1 XP_017211076.1  38.839  224 137  0 145  368  135  358
## 3326 NP_001348394.1 XP_017211076.1  40.969  227 134  0 140  366  102  328
## 3327 NP_001348394.1 XP_017211076.1  37.727  220 137  0 148  367  166  385
## 3328 NP_001348394.1 XP_017211076.1  43.976  166  93  0 203  368   81  246
## 3329 NP_001348394.1 XP_017211076.1  32.870  216 145  0  99  314  173  388
```

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## 3330 NP_001348394.1 XP_021331400.1  42.991  214 122  0 153  366  100  313
## 3331 NP_001348394.1 XP_021331400.1  43.925  214 120  0 153  366  604  817
## 3332 NP_001348394.1 XP_021331400.1  42.991  214 122  0 153  366  268  481
## 3333 NP_001348394.1 XP_021331400.1  40.969  227 134  0 140  366 1185 1411
## 3334 NP_001348394.1 XP_021331400.1  37.681  276 156  3  99  366  606  873
## 3335 NP_001348394.1 XP_021331400.1  38.043  276 155  2  99  366  634  901
## 3336 NP_001348394.1 XP_021331400.1  40.789  228 134  1 140  366  142  369
## 3337 NP_001348394.1 XP_021331400.1  43.256  215 122  0 153  367 1282 1496
## 3338 NP_001348394.1 XP_021331400.1  37.024  289 171  4  85  367  843 1126
## 3339 NP_001348394.1 XP_021331400.1  38.043  276 155  2  99  366 1256 1523
## 3340 NP_001348394.1 XP_021331400.1  37.319  276 157  3  99  366  186  453
## 3341 NP_001348394.1 XP_021331400.1  43.458  214 121  0 153  366  940 1153
## 3342 NP_001348394.1 XP_021331400.1  36.957  276 158  2  99  366 1200 1467
## 3343 NP_001348394.1 XP_021331400.1  41.704  223 125  2 149  366   63  285
## 3344 NP_001348394.1 XP_021331400.1  41.121  214 126  0 153  366  520  733
## 3345 NP_001348394.1 XP_021331400.1  36.957  276 158  2  99  366  746 1013
## 3346 NP_001348394.1 XP_021331400.1  37.687  268 167  0  99  366  242  509
## 3347 NP_001348394.1 XP_021331400.1  41.589  214 125  0 153  366  576  789
## 3348 NP_001348394.1 XP_021331400.1  40.654  214 127  0 153  366  184  397
## 3349 NP_001348394.1 XP_021331400.1  36.786  280 161  2  95  366 1280 1551
## 3350 NP_001348394.1 XP_021331400.1  40.541  222 132  0 145  366  736  957
## 3351 NP_001348394.1 XP_021331400.1  41.121  214 126  0 153  366  352  565
## 3352 NP_001348394.1 XP_021331400.1  41.121  214 126  0 153  366  828 1041
## 3353 NP_001348394.1 XP_021331400.1  36.170  282 158  3  99  366  942 1215
## 3354 NP_001348394.1 XP_021331400.1  41.121  214 126  0 153  366 1394 1607
## 3355 NP_001348394.1 XP_021331400.1  37.091  275 161  4  98  366  493  761
## 3356 NP_001348394.1 XP_021331400.1  39.720  214 129  0 153  366  464  677
## 3357 NP_001348394.1 XP_021331400.1  35.889  287 162  3  99  371  914 1192
## 3358 NP_001348394.1 XP_021331400.1  38.785  214 131  0 153  366 1534 1747
## 3359 NP_001348394.1 XP_021331400.1  35.507  276 162  2  99  366 1424 1691
## 3360 NP_001348394.1 XP_021331400.1  36.594  276 159  2  99  366 1312 1579
## 3361 NP_001348394.1 XP_021331400.1  36.232  276 160  2  99  366 1368 1635
## 3362 NP_001348394.1 XP_021331400.1  40.654  214 127  0 153  366  436  649
## 3363 NP_001348394.1 XP_021331400.1  39.252  214 130  0 153  366  492  705
## 3364 NP_001348394.1 XP_021331400.1  34.926  272 177  0  95  366  350  621
## 3365 NP_001348394.1 XP_021331400.1  40.252  159  95  0 153  311 1590 1748
## 3366 NP_001348394.1 XP_021331400.1  41.463   82  47  1 288  368   66  147
## 3367 NP_001348394.1 XP_009296573.2  42.991  214 122  0 153  366  247  460
## 3368 NP_001348394.1 XP_009296573.2  41.121  214 126  0 153  366  107  320
## 3369 NP_001348394.1 XP_009296573.2  42.056  214 124  0 153  366   79  292
## 3370 NP_001348394.1 XP_009296573.2  40.654  214 127  0 153  366  163  376
## 3371 NP_001348394.1 XP_009296573.2  42.487  193 111  0 174  366   16  208
## 3372 NP_001348394.1 XP_009296573.2  39.252  214 130  0 153  366   23  236
## 3373 NP_001348394.1 XP_009296573.2  41.121  214 126  0 153  366  191  404
## 3374 NP_001348394.1 XP_009296573.2  37.963  216 134  0 153  368   51  266
## 3375 NP_001348394.1 XP_009296573.2  40.187  214 128  0 153  366  219  432
## 3376 NP_001348394.1 XP_009296573.2  44.186  172  96  0 195  366    9  180
## 3377 NP_001348394.1 XP_009296573.2  38.318  214 132  0 153  366  135  348
## 3378 NP_001348394.1 XP_009296573.2  35.000  160 104  0 153  312  331  490
## 3379 NP_001348394.1 XP_021331067.1  41.589  214 125  0 153  366  131  344
## 3380 NP_001348394.1 XP_021331067.1  42.487  193 111  0 174  366  180  372
## 3381 NP_001348394.1 XP_021331067.1  40.789  228 134  1 140  367   63  289
## 3382 NP_001348394.1 XP_021331067.1  37.860  243 151  0  99  341  133  375
## 3383 NP_001348394.1 XP_021331067.1  41.451  193 109  2 176  366  126  316
```

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## 3384 NP_001348394.1 NP_001314792.1  40.187  214 128  0 153  366   99  312
## 3385 NP_001348394.1 NP_001314792.1  38.326  227 139  1 140  366   59  284
## 3386 NP_001348394.1 NP_001314792.1  40.513  195 116  0 153  347  127  321
## 3387 NP_001348394.1 NP_001314792.1  38.272   81  50  0 288  368   66  146
## 3388 NP_001348394.1 XP_021331225.1  43.256  215 122  0 153  367  284  498
## 3389 NP_001348394.1 XP_021331225.1  42.523  214 123  0 153  366  256  469
## 3390 NP_001348394.1 XP_021331225.1  42.056  214 124  0 153  366  144  357
## 3391 NP_001348394.1 XP_021331225.1  41.589  214 125  0 153  366  228  441
## 3392 NP_001348394.1 XP_021331225.1  38.367  245 147  1 126  366    1  245
## 3393 NP_001348394.1 XP_021331225.1  41.121  214 126  0 153  366  200  413
## 3394 NP_001348394.1 XP_021331225.1  41.121  214 126  0 153  366   88  301
## 3395 NP_001348394.1 XP_021331225.1  42.056  214 124  0 153  366  172  385
## 3396 NP_001348394.1 XP_021331225.1  39.252  214 130  0 153  366   60  273
## 3397 NP_001348394.1 XP_021331225.1  41.121  214 126  0 153  366  116  329
## 3398 NP_001348394.1 XP_021331389.1  41.423  239 137  2 130  366   46  283
## 3399 NP_001348394.1 XP_021331389.1  43.256  215 122  0 153  367  126  340
## 3400 NP_001348394.1 XP_021331389.1  42.056  214 124  0 153  366   98  311
## 3401 NP_001348394.1 XP_021331389.1  41.718  163  95  0 153  315  182  344
## 3402 NP_001348394.1 NP_001108366.1  42.925  212 121  0 155  366   61  272
## 3403 NP_001348394.1 NP_001108366.1  41.121  214 126  0 140  353   74  287
## 3404 NP_001348394.1 NP_001108366.1  39.535  215 130  0 153  367  115  329
## 3405 NP_001348394.1 NP_001108366.1  39.070  215 130  1 153  367  143  356
## 3406 NP_001348394.1 NP_001108366.1  36.420  162 102  1 153  314  199  359
## 3407 NP_001348394.1 XP_009294134.1  42.056  214 124  0 153  366  157  370
## 3408 NP_001348394.1 XP_009294134.1  38.426  216 133  0 153  368  241  456
## 3409 NP_001348394.1 XP_009294134.1  42.632  190 109  0 178  367  154  343
## 3410 NP_001348394.1 XP_009294134.1  37.383  214 134  0 153  366  213  426
## 3411 NP_001348394.1 XP_009294134.1  40.838  191 113  0 176  366   96  286
## 3412 NP_001348394.1 XP_021331309.1  40.187  214 128  0 153  366   76  289
## 3413 NP_001348394.1 XP_021331309.1  41.969  193 112  0 174  366  125  317
## 3414 NP_001348394.1 XP_021331309.1  37.209  215 135  0 153  367  132  346
## 3415 NP_001348394.1 XP_021331309.1  37.654  162 101  0 153  314  188  349
## 3416 NP_001348394.1 XP_021331105.1  43.056  216 121  1 153  366 1044 1259
## 3417 NP_001348394.1 XP_021331105.1  43.439  221 125  0 146  366  588  808
## 3418 NP_001348394.1 XP_021331105.1  42.991  214 122  0 153  366  371  584
## 3419 NP_001348394.1 XP_021331105.1  42.056  214 124  0 153  366  287  500
## 3420 NP_001348394.1 XP_021331105.1  47.150  193 102  0 174  366  925 1117
## 3421 NP_001348394.1 XP_021331105.1  43.056  216 123  0 153  368  932 1147
## 3422 NP_001348394.1 XP_021331105.1  42.466  219 126  0 148  366  983 1201
## 3423 NP_001348394.1 XP_021331105.1  43.458  214 121  0 153  366  483  696
## 3424 NP_001348394.1 XP_021331105.1  42.523  214 123  0 153  366  960 1173
## 3425 NP_001348394.1 XP_021331105.1  42.991  214 122  0 153  366  259  472
## 3426 NP_001348394.1 XP_021331105.1  41.256  223 131  0 144  366  222  444
## 3427 NP_001348394.1 XP_021331105.1  41.256  223 131  0 144  366  839 1061
## 3428 NP_001348394.1 XP_021331105.1  39.130  276 165  2  94  366  814 1089
## 3429 NP_001348394.1 XP_021331105.1  41.589  214 125  0 153  366  315  528
## 3430 NP_001348394.1 XP_021331105.1  41.121  214 126  0 153  366  343  556
## 3431 NP_001348394.1 XP_021331105.1  40.278  216 129  0 153  368  567  782
## 3432 NP_001348394.1 XP_021331105.1  41.589  214 125  0 153  366  427  640
## 3433 NP_001348394.1 XP_021331105.1  40.465  215 127  1 153  366  651  865
## 3434 NP_001348394.1 XP_021331105.1  39.252  214 130  0 153  366  539  752
## 3435 NP_001348394.1 XP_021331105.1  41.981  212 104  2 174  366    8  219
## 3436 NP_001348394.1 XP_021331105.1  44.048  168  94  0 197  364    3  170
## 3437 NP_001348394.1 XP_021331105.1  35.338  266 124  2 153  370   43  308
```

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## 3438 NP_001348394.1 XP_021331105.1  37.975  237 121  3 153  366   15  248
## 3439 NP_001348394.1 XP_021331105.1  41.667  192 110  1 153  342 1100 1291
## 3440 NP_001348394.1 XP_021331105.1  43.636  165  91  1 153  315 1128 1292
## 3441 NP_001348394.1 XP_021331105.1  43.262  141  80  0 226  366    4  144
## 3442 NP_001348394.1 XP_021331105.1  44.737  114  63  0 253  366    3  116
## 3443 NP_001348394.1 XP_021331105.1  42.529   87  50  0 280  366    2   88
## 3444 NP_001348394.1 XP_021331105.1  43.333   60  34  0 309  368    3   62
## 3445 NP_001348394.1 XP_021329614.1  42.523  214 123  0 153  366  512  725
## 3446 NP_001348394.1 XP_021329614.1  44.615  195 108  0 172  366  475  669
## 3447 NP_001348394.1 XP_021329614.1  42.523  214 123  0 153  366   56  269
## 3448 NP_001348394.1 XP_021329614.1  38.938  226 138  0 146  371  189  414
## 3449 NP_001348394.1 XP_021329614.1  39.912  228 136  1 140  367  472  698
## 3450 NP_001348394.1 XP_021329614.1  41.667  216 126  0 153  368  168  383
## 3451 NP_001348394.1 XP_021329614.1  42.056  214 124  0 153  366  140  353
## 3452 NP_001348394.1 XP_021329614.1  42.326  215 124  0 153  367   84  298
## 3453 NP_001348394.1 XP_021329614.1  40.654  214 127  0 153  366  112  325
## 3454 NP_001348394.1 XP_021329614.1  42.932  191 109  0 176  366   51  241
## 3455 NP_001348394.1 XP_021329614.1  36.437  247 129  1  99  345  514  732
## 3456 NP_001348394.1 XP_017211129.1  43.925  214 120  0 153  366  115  328
## 3457 NP_001348394.1 XP_017211129.1  39.200  250 148  1 126  371   56  305
## 3458 NP_001348394.1 XP_017211129.1  42.466  219 126  0 148  366  166  384
## 3459 NP_001348394.1 XP_017211129.1  36.940  268 169  0  99  366   89  356
## 3460 NP_001348394.1 XP_017211129.1  40.187  214 128  0 153  366  199  412
## 3461 NP_001348394.1 XP_017211129.1  35.185  270 175  0  99  368  173  442
## 3462 NP_001348394.1 XP_017211129.1  37.654  162 101  0 153  314  283  444
## 3463 NP_001348394.1 XP_017211129.1  33.333   51  34  0 153  203  395  445
## 3464 NP_001348394.1 XP_017210690.1  40.359  223 133  0 148  370  139  361
## 3465 NP_001348394.1 XP_017210690.1  34.906  318 189  4  50  366    1  301
## 3466 NP_001348394.1 XP_017210690.1  45.000  180  99  0 174  353  137  316
## 3467 NP_001348394.1 XP_017210690.1  40.000  210 126  0 159  368   38  247
## 3468 NP_001348394.1 XP_017210690.1  34.944  269 175  0  99  367  118  386
## 3469 NP_001348394.1 XP_017210690.1  32.407  216 146  0  99  314  174  389
## 3470 NP_001348394.1 XP_017211885.2  42.130  216 125  0 153  368  422  637
## 3471 NP_001348394.1 XP_017211885.2  40.654  214 127  0 153  366  114  327
## 3472 NP_001348394.1 XP_017211885.2  42.523  214 123  0 153  366  338  551
## 3473 NP_001348394.1 XP_017211885.2  39.207  227 138  0 140  366  269  495
## 3474 NP_001348394.1 XP_017211885.2  42.056  214 124  0 153  366  366  579
## 3475 NP_001348394.1 XP_017211885.2  40.187  214 128  0 153  366  618  831
## 3476 NP_001348394.1 XP_017211885.2  40.654  214 127  0 153  366  198  411
## 3477 NP_001348394.1 XP_017211885.2  40.654  214 127  0 153  366   30  243
## 3478 NP_001348394.1 XP_017211885.2  38.889  216 132  0 153  368   58  273
## 3479 NP_001348394.1 XP_017211885.2  40.187  214 128  0 153  366  310  523
## 3480 NP_001348394.1 XP_017211885.2  38.785  214 131  0 153  366  478  691
## 3481 NP_001348394.1 XP_017211885.2  41.294  201 118  0 153  353  534  734
## 3482 NP_001348394.1 XP_017211885.2  38.785  214 131  0 153  366  562  775
## 3483 NP_001348394.1 XP_017211885.2  41.885  191 111  0 176  366   25  215
## 3484 NP_001348394.1 XP_017211885.2  38.537  205 126  0 162  366  515  719
## 3485 NP_001348394.1 XP_017211885.2  34.657  277 170  4  97  368  647  917
## 3486 NP_001348394.1 XP_017211885.2  36.220  127  81  0 242  368    7  133
## 3487 NP_001348394.1 XP_017211885.2  36.486   74  43  1 299  368    4   77
## 3488 NP_001348394.1 NP_001353569.1  40.789  228 132  1 131  355   73  300
## 3489 NP_001348394.1 NP_001353569.1  40.704  199 118  0 168  366   85  283
## 3490 NP_001348394.1 NP_001353569.1  36.522  230 135  1 148  366  149  378
## 3491 NP_001348394.1 NP_001353569.1  33.617  235 135  5  99  317  156  385
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## 3492 NP_001348394.1 XP_021331480.1  39.918  243 146  0 126  368   65  307
## 3493 NP_001348394.1 XP_009299290.1  39.918  243 146  0 126  368   65  307
## 3494 NP_001348394.1 XP_009294092.1  41.063  207 120  1 162  366   19  225
## 3495 NP_001348394.1 XP_009294092.1  38.426  216 133  0 152  367   39  254
## 3496 NP_001348394.1 XP_009294092.1  44.286  140  78  0 174  313  117  256
## 3497 NP_001348394.1 XP_009294092.1  35.338  133  86  0 153  285  124  256
## 3498 NP_001348394.1 XP_021329621.1  42.991  214 122  0 153  366   80  293
## 3499 NP_001348394.1 XP_021329621.1  40.465  215 128  0 153  367  136  350
## 3500 NP_001348394.1 XP_021329621.1  41.589  214 125  0 153  366  192  405
## 3501 NP_001348394.1 XP_021329621.1  39.720  214 129  0 153  366  164  377
## 3502 NP_001348394.1 XP_021329621.1  41.121  214 126  0 153  366  108  321
## 3503 NP_001348394.1 XP_021329621.1  44.503  191 106  0 176  366   75  265
## 3504 NP_001348394.1 XP_021329621.1  40.000  160  96  0 153  312  248  407
## 3505 NP_001348394.1 XP_021329621.1  34.946  186  93  1  99  284  250  407
## 3506 NP_001348394.1 XP_021329620.1  42.991  214 122  0 153  366   80  293
## 3507 NP_001348394.1 XP_021329620.1  40.465  215 128  0 153  367  136  350
## 3508 NP_001348394.1 XP_021329620.1  41.589  214 125  0 153  366  192  405
## 3509 NP_001348394.1 XP_021329620.1  39.720  214 129  0 153  366  164  377
## 3510 NP_001348394.1 XP_021329620.1  41.121  214 126  0 153  366  108  321
## 3511 NP_001348394.1 XP_021329620.1  44.503  191 106  0 176  366   75  265
## 3512 NP_001348394.1 XP_021329620.1  40.000  160  96  0 153  312  248  407
## 3513 NP_001348394.1 XP_021329620.1  34.946  186  93  1  99  284  250  407
## 3514 NP_001348394.1 XP_021329619.1  42.991  214 122  0 153  366   80  293
## 3515 NP_001348394.1 XP_021329619.1  40.465  215 128  0 153  367  136  350
## 3516 NP_001348394.1 XP_021329619.1  41.589  214 125  0 153  366  192  405
## 3517 NP_001348394.1 XP_021329619.1  39.720  214 129  0 153  366  164  377
## 3518 NP_001348394.1 XP_021329619.1  41.121  214 126  0 153  366  108  321
## 3519 NP_001348394.1 XP_021329619.1  44.503  191 106  0 176  366   75  265
## 3520 NP_001348394.1 XP_021329619.1  40.000  160  96  0 153  312  248  407
## 3521 NP_001348394.1 XP_021329619.1  34.946  186  93  1  99  284  250  407
## 3522 NP_001348394.1 XP_021329618.1  42.991  214 122  0 153  366   80  293
## 3523 NP_001348394.1 XP_021329618.1  40.465  215 128  0 153  367  136  350
## 3524 NP_001348394.1 XP_021329618.1  41.589  214 125  0 153  366  192  405
## 3525 NP_001348394.1 XP_021329618.1  39.720  214 129  0 153  366  164  377
## 3526 NP_001348394.1 XP_021329618.1  41.121  214 126  0 153  366  108  321
## 3527 NP_001348394.1 XP_021329618.1  44.503  191 106  0 176  366   75  265
## 3528 NP_001348394.1 XP_021329618.1  40.000  160  96  0 153  312  248  407
## 3529 NP_001348394.1 XP_021329618.1  34.946  186  93  1  99  284  250  407
## 3530 NP_001348394.1 XP_021329617.1  42.991  214 122  0 153  366   80  293
## 3531 NP_001348394.1 XP_021329617.1  40.465  215 128  0 153  367  136  350
## 3532 NP_001348394.1 XP_021329617.1  41.589  214 125  0 153  366  192  405
## 3533 NP_001348394.1 XP_021329617.1  39.720  214 129  0 153  366  164  377
## 3534 NP_001348394.1 XP_021329617.1  41.121  214 126  0 153  366  108  321
## 3535 NP_001348394.1 XP_021329617.1  44.503  191 106  0 176  366   75  265
## 3536 NP_001348394.1 XP_021329617.1  40.000  160  96  0 153  312  248  407
## 3537 NP_001348394.1 XP_021329617.1  34.946  186  93  1  99  284  250  407
## 3538 NP_001348394.1 XP_017211284.1  39.113  248 147  1 123  366   48  295
## 3539 NP_001348394.1 XP_017211284.1  37.500  216 135  0 153  368  110  325
## 3540 NP_001348394.1 XP_017211284.1  38.710  186 114  0 153  338  166  351
## 3541 NP_001348394.1 XP_017211284.1  36.420  162 103  0 153  314  194  355
## 3542 NP_001348394.1 XP_017210034.1  40.000  245 143  1 126  366   56  300
## 3543 NP_001348394.1 XP_017210034.1  40.513  195 116  0 174  368  164  358
## 3544 NP_001348394.1 XP_017210034.1  38.140  215 133  0 153  367  171  385
## 3545 NP_001348394.1 XP_017210034.1  42.771  166  95  0 203  368   81  246
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## 3546 NP_001348394.1 XP_017210034.1  31.944  216 147  0  99  314  173  388
## 3547 NP_001348394.1 XP_017210014.1  36.965  257 154  1 110  366   17  265
## 3548 NP_001348394.1 XP_017210014.1  36.820  239 149  1 128  366   57  293
## 3549 NP_001348394.1 XP_017210014.1  38.140  215 132  1 153  367  108  321
## 3550 NP_001348394.1 XP_017210014.1  44.203  138  77  0 232  369   47  184
## 3551 NP_001348394.1 XP_017210014.1  37.037  162 101  1 153  314  164  324
## 3552 NP_001348394.1 XP_003198463.4  39.720  214 129  0 153  366  134  347
## 3553 NP_001348394.1 XP_003198463.4  43.229  192 109  0 175  366  128  319
## 3554 NP_001348394.1 XP_003198463.4  37.097  248 148  2 123  366   48  291
## 3555 NP_001348394.1 XP_003198463.4  37.674  215 133  1 153  367  162  375
## 3556 NP_001348394.1 XP_003198463.4  32.738  168  86  1 174  314  211  378
## 3557 NP_001348394.1 XP_003198463.4  38.095   84  48  1 288  371   77  156
## 3558 NP_001348394.1 XP_021330818.1  40.639  219 130  0 148  366  162  380
## 3559 NP_001348394.1 XP_021330818.1  41.121  214 126  0 153  366  111  324
## 3560 NP_001348394.1 XP_021330818.1  42.056  214 124  0 153  366   83  296
## 3561 NP_001348394.1 XP_021330818.1  40.741  216 128  0 153  368  223  438
## 3562 NP_001348394.1 XP_021330818.1  39.720  214 129  0 153  366  195  408
## 3563 NP_001348394.1 XP_021330818.1  41.121  214 126  0 153  366  139  352
## 3564 NP_001348394.1 XP_021330818.1  39.604  202 122  0 167  368   69  270
## 3565 NP_001348394.1 XP_021330818.1  41.579  190 111  0 153  342  251  440
## 3566 NP_001348394.1 XP_021331140.1  41.704  223 129  1 145  366   19  241
## 3567 NP_001348394.1 XP_021331140.1  43.925  214 120  0 153  366  168  381
## 3568 NP_001348394.1 XP_021331140.1  37.545  277 156  3  99  366   29  297
## 3569 NP_001348394.1 XP_021331140.1  41.589  214 125  0 153  366  112  325
## 3570 NP_001348394.1 XP_021331140.1  47.027  185  97  1 183  366    1  185
## 3571 NP_001348394.1 XP_021331140.1  41.121  214 126  0 153  366  140  353
## 3572 NP_001348394.1 XP_021331140.1  42.268  194 112  0 153  346  196  389
## 3573 NP_001348394.1 XP_021331140.1  36.214  243 120  2  76  318  182  389
## 3574 NP_001348394.1 XP_021331140.1  42.675  157  89  1 213  368    3  159
## 3575 NP_001348394.1 XP_021331140.1  46.154  104  56  0 267  370    1  104
## 3576 NP_001348394.1 XP_017211103.1  42.291  227 130  1 140  366   59  284
## 3577 NP_001348394.1 XP_017211103.1  40.465  215 128  0 153  367  127  341
## 3578 NP_001348394.1 XP_017211103.1  41.451  193 113  0 174  366  120  312
## 3579 NP_001348394.1 XP_017211103.1  40.491  163  97  0 153  315  183  345
## 3580 NP_001348394.1 XP_001923745.2  42.056  214 124  0 153  366  323  536
## 3581 NP_001348394.1 XP_001923745.2  41.850  227 131  1 140  366   59  284
## 3582 NP_001348394.1 XP_001923745.2  39.189  222 135  0 145  366  455  676
## 3583 NP_001348394.1 XP_001923745.2  42.523  214 123  0 153  366  547  760
## 3584 NP_001348394.1 XP_001923745.2  37.687  268 167  0  99  366  101  368
## 3585 NP_001348394.1 XP_001923745.2  39.720  214 129  0 153  366  407  620
## 3586 NP_001348394.1 XP_001923745.2  40.741  216 128  0 153  368  351  566
## 3587 NP_001348394.1 XP_001923745.2  41.121  214 126  0 153  366  239  452
## 3588 NP_001348394.1 XP_001923745.2  39.720  214 129  0 153  366  491  704
## 3589 NP_001348394.1 XP_001923745.2  36.101  277 161  2  98  366  212  480
## 3590 NP_001348394.1 XP_001923745.2  39.189  222 135  0 145  366  371  592
## 3591 NP_001348394.1 XP_001923745.2  40.187  214 128  0 153  366  435  648
## 3592 NP_001348394.1 XP_001923745.2  39.252  214 130  0 153  366  519  732
## 3593 NP_001348394.1 XP_001923745.2  39.252  214 130  0 153  366   99  312
## 3594 NP_001348394.1 XP_001923745.2  40.187  214 128  0 153  366  183  396
## 3595 NP_001348394.1 XP_001923745.2  38.785  214 131  0 153  366  211  424
## 3596 NP_001348394.1 XP_001923745.2  41.451  193 113  0 174  366  316  508
## 3597 NP_001348394.1 XP_001923745.2  41.872  203 118  0 140  342  562  764
## 3598 NP_001348394.1 XP_021331156.1  43.458  214 121  0 153  366 1086 1299
## 3599 NP_001348394.1 XP_021331156.1  46.354  192 103  0 175  366 1472 1663
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## 3600 NP_001348394.1 XP_021331156.1  42.991  214 122  0 153  366 1142 1355
## 3601 NP_001348394.1 XP_021331156.1  42.291  227 131  0 140  366  262  488
## 3602 NP_001348394.1 XP_021331156.1  42.991  214 122  0 153  366 1030 1243
## 3603 NP_001348394.1 XP_021331156.1  46.907  194 102  1 176  368 1444 1637
## 3604 NP_001348394.1 XP_021331156.1  42.056  214 123  1 153  366  331  543
## 3605 NP_001348394.1 XP_021331156.1  41.096  219 129  0 148  366 1109 1327
## 3606 NP_001348394.1 XP_021331156.1  37.319  276 156  3  99  366  501  767
## 3607 NP_001348394.1 XP_021331156.1  41.121  214 125  1 153  366 1170 1382
## 3608 NP_001348394.1 XP_021331156.1  41.121  214 126  0 153  366  303  516
## 3609 NP_001348394.1 XP_021331156.1  39.924  263 142  3  99  353  640  894
## 3610 NP_001348394.1 XP_021331156.1  41.553  219 127  1 148  366  354  571
## 3611 NP_001348394.1 XP_021331156.1  41.121  214 126  0 153  366  219  432
## 3612 NP_001348394.1 XP_021331156.1  39.749  239 135  1 137  366  921 1159
## 3613 NP_001348394.1 XP_021331156.1  39.035  228 138  1 140  366  960 1187
## 3614 NP_001348394.1 XP_021331156.1  41.121  214 126  0 153  366  862 1075
## 3615 NP_001348394.1 XP_021331156.1  41.589  214 125  0 153  366 1002 1215
## 3616 NP_001348394.1 XP_021331156.1  37.083  240 148  1 130  366   25  264
## 3617 NP_001348394.1 XP_021331156.1  41.589  214 124  1 153  366  499  711
## 3618 NP_001348394.1 XP_021331156.1  42.593  216 124  0 153  368  582  797
## 3619 NP_001348394.1 XP_021331156.1  40.278  216 129  0 153  368  750  965
## 3620 NP_001348394.1 XP_021331156.1  41.748  206 120  0 148  353  885 1090
## 3621 NP_001348394.1 XP_021331156.1  42.268  194 112  0 153  346 1478 1671
## 3622 NP_001348394.1 XP_021331156.1  41.121  214 126  0 153  366  638  851
## 3623 NP_001348394.1 XP_021331156.1  35.075  268 174  0  99  366  137  404
## 3624 NP_001348394.1 XP_021331156.1  35.531  273 166  3  99  366  724  991
## 3625 NP_001348394.1 XP_021331156.1  41.395  215 124  2 153  366 1338 1551
## 3626 NP_001348394.1 XP_021331156.1  39.252  214 130  0 153  366  135  348
## 3627 NP_001348394.1 XP_021331156.1  36.564  227 144  0 140  366   66  292
## 3628 NP_001348394.1 XP_021331156.1  39.565  230 138  1 140  368  820 1049
## 3629 NP_001348394.1 XP_021331156.1  39.583  192 116  0 175  366  129  320
## 3630 NP_001348394.1 XP_021331156.1  34.815  270 174  2  98  366  751 1019
## 3631 NP_001348394.1 XP_017211185.1  40.408  245 142  2 126  366   56  300
## 3632 NP_001348394.1 XP_017211185.1  38.426  216 133  0 153  368  143  358
## 3633 NP_001348394.1 XP_017211185.1  37.273  220 138  0 148  367  166  385
## 3634 NP_001348394.1 XP_017211185.1  43.373  166  94  0 203  368   81  246
## 3635 NP_001348394.1 XP_017211185.1  32.407  216 146  0  99  314  173  388
## 3636 NP_001348394.1 XP_021329616.1  42.991  214 122  0 153  366  105  318
## 3637 NP_001348394.1 XP_021329616.1  40.465  215 128  0 153  367  161  375
## 3638 NP_001348394.1 XP_021329616.1  41.589  214 125  0 153  366  217  430
## 3639 NP_001348394.1 XP_021329616.1  39.720  214 129  0 153  366  189  402
## 3640 NP_001348394.1 XP_021329616.1  41.121  214 126  0 153  366  133  346
## 3641 NP_001348394.1 XP_021329616.1  44.503  191 106  0 176  366  100  290
## 3642 NP_001348394.1 XP_021329616.1  40.000  160  96  0 153  312  273  432
## 3643 NP_001348394.1 XP_021329616.1  34.946  186  93  1  99  284  275  432
## 3644 NP_001348394.1 XP_021331430.1  40.654  214 127  0 153  366   43  256
## 3645 NP_001348394.1 XP_021331430.1  40.367  218 130  0 153  370   71  288
## 3646 NP_001348394.1 XP_021331430.1  43.523  193 109  0 174  366    8  200
## 3647 NP_001348394.1 XP_021331430.1  40.625  224 131  1 145  366   91  314
## 3648 NP_001348394.1 XP_021331430.1  38.318  214 132  0 153  366   15  228
## 3649 NP_001348394.1 XP_021331430.1  41.765  170  99  0 197  366    3  172
## 3650 NP_001348394.1 XP_021331430.1  44.755  143  79  0 224  366    2  144
## 3651 NP_001348394.1 XP_021331430.1  38.342  193  89  2 153  315  127  319
## 3652 NP_001348394.1 XP_021331397.1  43.478  184 104  0 183  366    1  184
## 3653 NP_001348394.1 XP_021331397.1  43.030  165  94  0 174  338   20  184
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## 3654 NP_001348394.1 XP_021331397.1  45.283  159  87  0 153  311   27  185
## 3655 NP_001348394.1 XP_021331440.1  42.593  216 124  0 153  368  211  426
## 3656 NP_001348394.1 XP_021331440.1  42.056  214 124  0 153  366  183  396
## 3657 NP_001348394.1 XP_021331440.1  41.589  214 125  0 153  366  155  368
## 3658 NP_001348394.1 XP_021331440.1  41.121  214 126  0 153  366   99  312
## 3659 NP_001348394.1 XP_021331440.1  40.654  214 127  0 153  366   71  284
## 3660 NP_001348394.1 XP_021331440.1  41.121  214 126  0 153  366   43  256
## 3661 NP_001348394.1 XP_021331440.1  41.121  214 126  0 153  366  127  340
## 3662 NP_001348394.1 XP_021331440.1  40.278  216 129  0 153  368   15  230
## 3663 NP_001348394.1 XP_021331440.1  42.487  193 111  0 174  366    8  200
## 3664 NP_001348394.1 XP_021331440.1  41.538  195 114  0 144  338  230  424
## 3665 NP_001348394.1 XP_021331440.1  42.941  170  97  0 197  366    3  172
## 3666 NP_001348394.1 XP_021331440.1  44.755  143  79  0 224  366    2  144
## 3667 NP_001348394.1 XP_021331440.1  40.146  137  82  0 153  289  295  431
## 3668 NP_001348394.1 XP_021330961.1  44.041  193 108  0 174  366    8  200
## 3669 NP_001348394.1 XP_021330961.1  44.118  170  95  0 197  366    3  172
## 3670 NP_001348394.1 XP_021330961.1  48.438  128  66  0 224  351    2  129
## 3671 NP_001348394.1 XP_021330961.1  40.361  166  99  0 148  313   38  203
## 3672 NP_001348394.1 XP_021331029.1  41.121  214 126  0 153  366  119  332
## 3673 NP_001348394.1 XP_021331029.1  42.487  193 111  0 174  366  168  360
## 3674 NP_001348394.1 XP_021331029.1  40.789  228 134  1 140  367   51  277
## 3675 NP_001348394.1 XP_021331029.1  37.860  243 151  0  99  341  121  363
## 3676 NP_001348394.1 XP_021331029.1  41.451  193 109  2 176  366  114  304
## 3677 NP_001348394.1 XP_017211168.1  41.395  215 125  1 153  366   99  313
## 3678 NP_001348394.1 XP_017211168.1  44.792  192 105  1 176  366   66  257
## 3679 NP_001348394.1 XP_017211168.1  39.286  196 118  1 148  342  122  317
## 3680 NP_001348394.1 XP_017211168.1  43.293  164  93  0 153  316  156  319
## 3681 NP_001348394.1 XP_021323881.1  44.393  214 119  0 153  366  561  774
## 3682 NP_001348394.1 XP_021323881.1  42.593  216 124  0 151  366  643  858
## 3683 NP_001348394.1 XP_021323881.1  42.991  214 122  0 153  366  126  339
## 3684 NP_001348394.1 XP_021323881.1  45.596  193 105  0 174  366  610  802
## 3685 NP_001348394.1 XP_021323881.1  42.991  214 122  0 153  366  729  942
## 3686 NP_001348394.1 XP_021323881.1  41.589  214 125  0 153  366  238  451
## 3687 NP_001348394.1 XP_021323881.1  41.121  214 126  0 153  366  617  830
## 3688 NP_001348394.1 XP_021323881.1  45.078  193 106  0 174  366  119  311
## 3689 NP_001348394.1 XP_021323881.1  36.940  268 169  0  99  366  703  970
## 3690 NP_001348394.1 XP_021323881.1  36.965  257 162  0 110  366  223  479
## 3691 NP_001348394.1 XP_021323881.1  42.056  214 124  0 153  366   70  283
## 3692 NP_001348394.1 XP_021323881.1  44.560  193 107  0 174  366  554  746
## 3693 NP_001348394.1 XP_021323881.1  38.075  239 146  1 130  366  129  367
## 3694 NP_001348394.1 XP_021323881.1  41.546  207 119  1 160  366  514  718
## 3695 NP_001348394.1 XP_021323881.1  38.605  215 132  0 153  367  182  396
## 3696 NP_001348394.1 XP_021323881.1  40.465  215 128  0 153  367  673  887
## 3697 NP_001348394.1 XP_021323881.1  42.424  198 114  0 169  366   30  227
## 3698 NP_001348394.1 XP_021323881.1  41.121  214 126  0 153  366  785  998
## 3699 NP_001348394.1 XP_021323881.1  39.367  221 134  0 146  366   35  255
## 3700 NP_001348394.1 XP_021323881.1  40.654  214 127  0 153  366  701  914
## 3701 NP_001348394.1 XP_021323881.1  42.105  190 110  0 153  342  813 1002
## 3702 NP_001348394.1 XP_021323881.1  38.318  214 132  0 153  366  210  423
## 3703 NP_001348394.1 XP_021323881.1  40.000  190 114  0 153  342  294  483
## 3704 NP_001348394.1 XP_021323881.1  31.008  258 135  1 153  367  322  579
## 3705 NP_001348394.1 XP_021323881.1  32.353  170 107  1 118  287  842 1003
## 3706 NP_001348394.1 XP_017211131.1  40.000  245 143  1 126  366   56  300
## 3707 NP_001348394.1 XP_017211131.1  39.815  216 130  0 153  368  171  386
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## 3708 NP_001348394.1 XP_017211131.1  41.121  214 126  0 153  366  115  328
## 3709 NP_001348394.1 XP_017211131.1  37.220  223 140  0 148  370  138  360
## 3710 NP_001348394.1 XP_017211131.1  44.970  169  93  0 203  371   81  249
## 3711 NP_001348394.1 XP_017211131.1  32.870  216 145  0  99  314  173  388
## 3712 NP_001348394.1 XP_017211131.1  33.333   51  34  0 153  203  339  389
## 3713 NP_001348394.1 XP_009299025.2  39.207  227 138  0 140  366   69  295
## 3714 NP_001348394.1 XP_009299025.2  36.404  228 145  0 140  367   97  324
## 3715 NP_001348394.1 XP_009299025.2  38.140  215 132  1 153  367  138  351
## 3716 NP_001348394.1 XP_009299025.2  44.203  138  77  0 232  369   77  214
## 3717 NP_001348394.1 XP_009299025.2  37.037  162 101  1 153  314  194  354
## 3718 NP_001348394.1 XP_017208867.1  42.056  214 124  0 153  366  123  336
## 3719 NP_001348394.1 XP_017208867.1  40.654  214 127  0 153  366   67  280
## 3720 NP_001348394.1 XP_017208867.1  42.632  190 109  0 153  342  151  340
## 3721 NP_001348394.1 XP_017208867.1  36.321  212 126  1 164  366   41  252
## 3722 NP_001348394.1 XP_017208867.1  34.862  109  71  0 153  261  235  343
## 3723 NP_001348394.1 XP_021326763.1  39.535  215 130  0 153  367  104  318
## 3724 NP_001348394.1 XP_021326763.1  40.179  224 134  0 143  366   66  289
## 3725 NP_001348394.1 XP_021326763.1  36.744  215 135  1 153  367  132  345
## 3726 NP_001348394.1 XP_021326763.1  40.588  170 101  0 197  366   64  233
## 3727 NP_001348394.1 XP_021326763.1  33.929  168  84  1 174  314  181  348
## 3728 NP_001348394.1 XP_021326763.1  39.286   84  47  1 288  371   47  126
## 3729 NP_001348394.1 XP_017211093.2  36.694  248 153  1 123  366   52  299
## 3730 NP_001348394.1 XP_017211093.2  38.318  214 132  0 153  366  142  355
## 3731 NP_001348394.1 XP_017211093.2  37.755  196 122  0 175  370  192  387
## 3732 NP_001348394.1 XP_017211093.2  44.910  167  92  0 203  369   80  246
## 3733 NP_001348394.1 XP_017211093.2  37.037  162 102  0 153  314  226  387
## 3734 NP_001348394.1 XP_005174450.1  42.202  218 125  1 153  369   80  297
## 3735 NP_001348394.1 XP_005174450.1  43.979  191 107  0 176  366   75  265
## 3736 NP_001348394.1 XP_005174450.1  45.833  168  91  0 199  366   70  237
## 3737 NP_001348394.1 XP_005174450.1  33.566  143  95  0 110  252  149  291
## 3738 NP_001348394.1 XP_017207864.1  41.629  221 129  0 146  366   61  281
## 3739 NP_001348394.1 XP_017207864.1  42.991  214 122  0 153  366  236  449
## 3740 NP_001348394.1 XP_017207864.1  31.953  338 218  3  34  366   35  365
## 3741 NP_001348394.1 XP_017207864.1  40.969  227 130  2 142  366    1  225
## 3742 NP_001348394.1 XP_017207864.1  40.930  215 127  0 153  367  180  394
## 3743 NP_001348394.1 XP_017207864.1  35.448  268 170  1  99  366  210  474
## 3744 NP_001348394.1 XP_017207864.1  38.785  214 131  0 153  366  208  421
## 3745 NP_001348394.1 XP_017207864.1  40.881  159  91  1 153  311  320  475
## 3746 NP_001348394.1 XP_021332374.1  42.130  216 125  0 153  368  450  665
## 3747 NP_001348394.1 XP_021332374.1  42.056  214 124  0 153  366  114  327
## 3748 NP_001348394.1 XP_021332374.1  42.991  214 122  0 153  366  366  579
## 3749 NP_001348394.1 XP_021332374.1  40.187  214 128  0 153  366  646  859
## 3750 NP_001348394.1 XP_021332374.1  40.187  214 128  0 153  366  282  495
## 3751 NP_001348394.1 XP_021332374.1  42.056  214 124  0 153  366  394  607
## 3752 NP_001348394.1 XP_021332374.1  40.187  214 128  0 153  366   58  271
## 3753 NP_001348394.1 XP_021332374.1  40.654  214 127  0 153  366  506  719
## 3754 NP_001348394.1 XP_021332374.1  40.654  214 127  0 153  366  226  439
## 3755 NP_001348394.1 XP_021332374.1  40.187  214 128  0 153  366  338  551
## 3756 NP_001348394.1 XP_021332374.1  40.654  214 127  0 153  366  590  803
## 3757 NP_001348394.1 XP_021332374.1  40.187  214 128  0 153  366   30  243
## 3758 NP_001348394.1 XP_021332374.1  37.143  245 148  2 123  366  508  747
## 3759 NP_001348394.1 XP_021332374.1  35.271  258 167  0  96  353  505  762
## 3760 NP_001348394.1 XP_021332374.1  39.252  214 130  0 153  366  198  411
## 3761 NP_001348394.1 XP_021332374.1  41.885  191 111  0 176  366   25  215
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## 3762 NP_001348394.1 XP_021332374.1  34.657  277 170  4  97  368  675  945
## 3763 NP_001348394.1 XP_021332374.1  39.286  112  68  0 242  353    7  118
## 3764 NP_001348394.1 XP_021331499.1  45.078  193 106  0 176  368   68  260
## 3765 NP_001348394.1 XP_021331499.1  35.565  239 149  1 126  364   51  284
## 3766 NP_001348394.1 XP_021331499.1  31.081   74  51  0 152  225  212  285
## 3767 NP_001348394.1 XP_021330710.1  41.410  227 132  1 140  366   59  284
## 3768 NP_001348394.1 XP_021330710.1  40.930  215 127  0 153  367  127  341
## 3769 NP_001348394.1 XP_021330710.1  41.451  193 113  0 174  366  120  312
## 3770 NP_001348394.1 XP_021330710.1  41.104  163  96  0 153  315  183  345
## 3771 NP_001348394.1 NP_001104625.1  41.410  227 132  1 140  366   59  284
## 3772 NP_001348394.1 NP_001104625.1  40.930  215 127  0 153  367  127  341
## 3773 NP_001348394.1 NP_001104625.1  41.451  193 113  0 174  366  120  312
## 3774 NP_001348394.1 NP_001104625.1  40.491  163  97  0 153  315  183  345
## 3775 NP_001348394.1 XP_017211088.1  40.408  245 142  2 126  366   56  300
## 3776 NP_001348394.1 XP_017211088.1  38.889  216 132  0 153  368  143  358
## 3777 NP_001348394.1 XP_017211088.1  37.727  220 137  0 148  367  166  385
## 3778 NP_001348394.1 XP_017211088.1  43.373  166  94  0 203  368   81  246
## 3779 NP_001348394.1 XP_017211088.1  32.407  216 146  0  99  314  173  388
## 3780 NP_001348394.1 XP_017208864.1  35.000  280 166  2  99  370   67  338
## 3781 NP_001348394.1 XP_017208864.1  39.252  214 130  0 153  366   65  278
## 3782 NP_001348394.1 XP_017208864.1  35.023  217 141  0 152  368  148  364
## 3783 NP_001348394.1 XP_017208864.1  37.696  191 119  0 176  366   60  250
## 3784 NP_001348394.1 XP_017208864.1  36.979  192 121  0 153  344  177  368
## 3785 NP_001348394.1 XP_017211286.1  40.969  227 133  1 140  366   59  284
## 3786 NP_001348394.1 XP_017211286.1  42.786  201 115  0 153  353  127  327
## 3787 NP_001348394.1 XP_017211286.1  42.945  163  93  0 153  315  183  345
## 3788 NP_001348394.1 XP_017211286.1  38.372   86  49  2 148  231  262  345
## 3789 NP_001348394.1 XP_017210515.1  41.410  227 132  1 140  366   59  284
## 3790 NP_001348394.1 XP_017210515.1  40.930  215 127  0 153  367  127  341
## 3791 NP_001348394.1 XP_017210515.1  41.451  193 113  0 174  366  120  312
## 3792 NP_001348394.1 XP_017210515.1  41.104  163  96  0 153  315  183  345
## 3793 NP_001348394.1 XP_021330572.1  42.453  212 122  0 155  366   54  265
## 3794 NP_001348394.1 XP_021330572.1  41.121  214 126  0 140  353   67  280
## 3795 NP_001348394.1 XP_021330572.1  39.070  215 131  0 153  367  108  322
## 3796 NP_001348394.1 XP_021330572.1  38.605  215 131  1 153  367  136  349
## 3797 NP_001348394.1 XP_021330572.1  33.333  189  99  1 153  314  164  352
## 3798 NP_001348394.1 XP_005161613.2  42.487  193 111  0 174  366   65  257
## 3799 NP_001348394.1 XP_005161613.2  39.487  195 118  0 148  342   95  289
## 3800 NP_001348394.1 XP_005161613.2  38.068  176 109  0 191  366   54  229
## 3801 NP_001348394.1 XP_005161613.2  32.836   67  45  0 301  367   52  118
## 3802 NP_001348394.1 XP_005161613.2  33.333   51  34  0 153  203  240  290
## 3803 NP_001348394.1 XP_017210344.1  42.523  214 123  0 153  366   79  292
## 3804 NP_001348394.1 XP_017210344.1  42.523  214 123  0 153  366  219  432
## 3805 NP_001348394.1 XP_017210344.1  39.815  216 130  0 153  368   23  238
## 3806 NP_001348394.1 XP_017210344.1  42.523  214 123  0 153  366  163  376
## 3807 NP_001348394.1 XP_017210344.1  40.933  193 114  0 174  366   16  208
## 3808 NP_001348394.1 XP_017210344.1  39.252  214 130  0 153  366   51  264
## 3809 NP_001348394.1 XP_017210344.1  38.785  214 131  0 153  366  135  348
## 3810 NP_001348394.1 XP_017210344.1  44.767  172  95  0 195  366    9  180
## 3811 NP_001348394.1 XP_017210344.1  37.850  214 133  0 153  366  107  320
## 3812 NP_001348394.1 XP_017210344.1  30.263   76  53  0 153  228  359  434
## 3813 NP_001348394.1 XP_021330442.1  37.657  239 143  1 128  366    4  236
## 3814 NP_001348394.1 XP_021330442.1  40.826  218 129  0 153  370   51  268
## 3815 NP_001348394.1 XP_001336870.2  44.041  193 108  0 174  366   19  211
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## 3816 NP_001348394.1 XP_001336870.2  42.056  214 124  0 153  366   54  267
## 3817 NP_001348394.1 XP_001336870.2  42.056  214 124  0 153  366  110  323
## 3818 NP_001348394.1 XP_001336870.2  40.654  214 127  0 153  366   82  295
## 3819 NP_001348394.1 XP_001336870.2  40.654  214 127  0 153  366   26  239
## 3820 NP_001348394.1 XP_001336870.2  38.889  216 132  0 153  368  138  353
## 3821 NP_001348394.1 XP_001336870.2  40.187  214 128  0 153  366  166  379
## 3822 NP_001348394.1 XP_001336870.2  45.665  173  94  0 194  366   11  183
## 3823 NP_001348394.1 XP_001336870.2  37.674  215 134  0 153  367  222  436
## 3824 NP_001348394.1 XP_001336870.2  31.615  291 197  1  78  366  173  463
## 3825 NP_001348394.1 XP_021331497.1  44.776  201 111  0 153  353  133  333
## 3826 NP_001348394.1 XP_021331497.1  41.589  214 125  0 153  366  161  374
## 3827 NP_001348394.1 XP_021331497.1  43.925  214 119  1 153  366  189  401
## 3828 NP_001348394.1 XP_021331497.1  40.586  239 140  1 128  366   82  318
## 3829 NP_001348394.1 XP_021331497.1  39.269  219 133  0 148  366   72  290
## 3830 NP_001348394.1 XP_021331497.1  42.262  168  97  0 199  366   67  234
## 3831 NP_001348394.1 XP_021331497.1  40.588  170 100  1 148  317  240  408
## 3832 NP_001348394.1 XP_021331333.1  42.991  214 122  0 153  366  580  793
## 3833 NP_001348394.1 XP_021331333.1  40.088  227 136  0 140  366  119  345
## 3834 NP_001348394.1 XP_021331333.1  41.121  214 126  0 153  366  104  317
## 3835 NP_001348394.1 XP_021331333.1  42.523  214 123  0 153  366  720  933
## 3836 NP_001348394.1 XP_021331333.1  42.056  214 124  0 153  366  776  989
## 3837 NP_001348394.1 XP_021331333.1  42.523  214 123  0 153  366  216  429
## 3838 NP_001348394.1 XP_021331333.1  40.654  214 127  0 153  366  188  401
## 3839 NP_001348394.1 XP_021331333.1  39.024  246 147  1 124  366  604  849
## 3840 NP_001348394.1 XP_021331333.1  42.056  214 124  0 153  366  524  737
## 3841 NP_001348394.1 XP_021331333.1  37.643  263 148  2  99  353  274  528
## 3842 NP_001348394.1 XP_021331333.1  41.589  214 125  0 153  366  748  961
## 3843 NP_001348394.1 XP_021331333.1  41.589  214 125  0 153  366  552  765
## 3844 NP_001348394.1 XP_021331333.1  36.594  276 159  2  99  366  302  569
## 3845 NP_001348394.1 XP_021331333.1  42.056  214 124  0 153  366  440  653
## 3846 NP_001348394.1 XP_021331333.1  41.589  214 125  0 153  366  300  513
## 3847 NP_001348394.1 XP_021331333.1  37.319  276 157  2  99  366  358  625
## 3848 NP_001348394.1 XP_021331333.1  41.071  224 132  0 143  366   66  289
## 3849 NP_001348394.1 XP_021331333.1  36.594  276 159  2  99  366  330  597
## 3850 NP_001348394.1 XP_021331333.1  41.509  212 124  0 153  364  860 1071
## 3851 NP_001348394.1 XP_021331333.1  42.056  214 124  0 153  366  244  457
## 3852 NP_001348394.1 XP_021331333.1  41.589  214 125  0 153  366  664  877
## 3853 NP_001348394.1 XP_021331333.1  40.187  214 128  0 153  366  804 1017
## 3854 NP_001348394.1 XP_021331333.1  41.589  214 125  0 153  366  468  681
## 3855 NP_001348394.1 XP_021331333.1  35.145  276 163  2  99  366  638  905
## 3856 NP_001348394.1 XP_021331333.1  41.969  193 112  0 174  366  181  373
## 3857 NP_001348394.1 XP_021331333.1  43.005  193 110  0 174  366  853 1045
## 3858 NP_001348394.1 XP_021331333.1  35.870  276 161  2  99  366  442  709
## 3859 NP_001348394.1 XP_021331333.1  40.588  170 101  0 197  366   64  233
## 3860 NP_001348394.1 XP_021331333.1  39.286   84  47  1 288  371   47  126
## 3861 NP_001348394.1 XP_021331333.1  35.065   77  49  1 153  228 1000 1076
## 3862 NP_001348394.1 NP_001108377.1  41.204  216 127  0 153  368   91  306
## 3863 NP_001348394.1 NP_001108377.1  40.580  207 122  1 160  366   43  248
## 3864 NP_001348394.1 NP_001108377.1  39.720  214 129  0 153  366  119  332
## 3865 NP_001348394.1 NP_001108377.1  39.378  193 117  0 174  366   84  276
## 3866 NP_001348394.1 NP_001108377.1  35.681  213 137  0 153  365  231  443
## 3867 NP_001348394.1 NP_001108377.1  33.884  242 132  1 153  366  147  388
## 3868 NP_001348394.1 NP_001108377.1  35.047  214 139  0 153  366  203  416
## 3869 NP_001348394.1 NP_001108377.1  35.256  156  97  1 123  278  289  440
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## 3870 NP_001348394.1 NP_001108377.1  36.634  101  64  0 152  252  342  442
## 3871 NP_001348394.1 XP_005174571.3  40.171  234 139  1 134  366   60  293
## 3872 NP_001348394.1 XP_005174571.3  39.070  215 131  0 153  367  108  322
## 3873 NP_001348394.1 XP_005174571.3  36.744  215 135  1 153  367  136  349
## 3874 NP_001348394.1 XP_005174571.3  36.916  214 129  2 159  366   24  237
## 3875 NP_001348394.1 XP_005174571.3  33.929  168  84  1 174  314  185  352
## 3876 NP_001348394.1 XP_005174571.3  41.667   84  49  0 288  371   47  130
## 3877 NP_001348394.1 XP_003200032.2  40.654  214 127  0 153  366   81  294
## 3878 NP_001348394.1 XP_003200032.2  34.836  244 159  0 127  370   27  270
## 3879 NP_001348394.1 XP_003200032.2  36.087  230 140  2 141  366   12  238
## 3880 NP_001348394.1 XP_003200032.2  37.900  219 136  0 153  371  137  355
## 3881 NP_001348394.1 XP_017210984.1  40.271  221 132  0 148  368  166  386
## 3882 NP_001348394.1 XP_017210984.1  43.458  214 121  0 153  366  115  328
## 3883 NP_001348394.1 XP_017210984.1  40.639  219 130  0 148  366   82  300
## 3884 NP_001348394.1 XP_017210984.1  43.005  193 110  0 174  366  164  356
## 3885 NP_001348394.1 XP_017210984.1  40.000  210 126  0 159  368   65  274
## 3886 NP_001348394.1 XP_017210984.1  38.605  215 132  0 153  367  199  413
## 3887 NP_001348394.1 XP_017210984.1  32.407  216 146  0  99  314  201  416
## 3888 NP_001348394.1 XP_017211163.1  40.183  219 131  0 148  366   51  269
## 3889 NP_001348394.1 XP_017211163.1  42.056  214 124  0 140  353   71  284
## 3890 NP_001348394.1 XP_017211163.1  39.091  220 134  0 148  367  135  354
## 3891 NP_001348394.1 XP_017211163.1  37.037  162 102  0 153  314  196  357
## 3892 NP_001348394.1 XP_017211163.1  35.849   53  34  0 316  368   51  103
## 3893 NP_001348394.1 XP_005159403.1  42.929  198 112  1 170  366  255  452
## 3894 NP_001348394.1 XP_005159403.1  35.659  258 164  1 111  368  227  482
## 3895 NP_001348394.1 XP_005159403.1  40.491  163  97  0 153  315  323  485
## 3896 NP_001348394.1 XP_005159403.1  37.037  108  68  0 152  259  378  485
## 3897 NP_001348394.1 NP_001107958.1  37.354  257 153  1 110  366   47  295
## 3898 NP_001348394.1 NP_001107958.1  37.037  216 136  0 153  368  110  325
## 3899 NP_001348394.1 NP_001107958.1  38.140  215 133  0 153  367  138  352
## 3900 NP_001348394.1 NP_001107958.1  37.037  162 102  0 153  314  194  355
## 3901 NP_001348394.1 NP_001373790.1  42.523  214 123  0 153  366   95  308
## 3902 NP_001348394.1 NP_001373790.1  37.850  214 133  0 153  366   67  280
## 3903 NP_001348394.1 NP_001373790.1  38.579  197 121  0 152  348  122  318
## 3904 NP_001348394.1 NP_001373790.1  38.690  168 103  0 199  366   57  224
## 3905 NP_001348394.1 NP_001373790.1  39.216  153  91  1 216  368   48  198
## 3906 NP_001348394.1 XP_021331357.1  41.395  215 126  0 153  367  106  320
## 3907 NP_001348394.1 XP_021331357.1  38.017  242 148  1 127  366   50  291
## 3908 NP_001348394.1 XP_021331357.1  38.140  215 132  1 153  367  134  347
## 3909 NP_001348394.1 XP_021331357.1  33.862  189  98  1 153  314  162  350
## 3910 NP_001348394.1 XP_021331357.1  44.048   84  47  0 288  371   73  156
## 3911 NP_001348394.1    NP_999959.1  42.929  198 112  1 170  366  255  452
## 3912 NP_001348394.1    NP_999959.1  35.659  258 164  1 111  368  227  482
## 3913 NP_001348394.1    NP_999959.1  40.491  163  97  0 153  315  323  485
## 3914 NP_001348394.1    NP_999959.1  37.037  108  68  0 152  259  378  485
## 3915 NP_001348394.1 XP_021331432.1  38.462  247 149  1 123  366   11  257
## 3916 NP_001348394.1 XP_021331432.1  39.247  186 113  0 153  338  100  285
## 3917 NP_001348394.1 XP_021331432.1  39.157  166 101  0 148  313  123  288
## 3918 NP_001348394.1 XP_021331056.1  39.269  219 133  0 153  371   39  257
## 3919 NP_001348394.1 XP_021331056.1  40.933  193 114  0 174  366   32  224
## 3920 NP_001348394.1 XP_021331056.1  45.087  173  95  0 194  366   24  196
## 3921 NP_001348394.1 XP_021331056.1  37.226  137  86  0 153  289  123  259
## 3922 NP_001348394.1 XP_021331056.1  44.211   95  53  0 272  366   18  112
## 3923 NP_001348394.1 XP_005161564.2  37.354  257 153  1 110  366   47  295
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## 3924 NP_001348394.1 XP_005161564.2  37.500  216 135  0 153  368  110  325
## 3925 NP_001348394.1 XP_005161564.2  38.172  186 115  0 153  338  166  351
## 3926 NP_001348394.1 XP_005161564.2  35.802  162 104  0 153  314  194  355
## 3927 NP_001348394.1 XP_021331235.1  40.654  214 127  0 140  353   69  282
## 3928 NP_001348394.1 XP_021331235.1  36.404  228 145  0 140  367   97  324
## 3929 NP_001348394.1 XP_021331235.1  38.140  215 132  1 153  367  138  351
## 3930 NP_001348394.1 XP_021331235.1  44.203  138  77  0 232  369   77  214
## 3931 NP_001348394.1 XP_021331235.1  37.037  162 101  1 153  314  194  354
## 3932 NP_001348394.1 XP_017211118.1  40.654  214 127  0 140  353   69  282
## 3933 NP_001348394.1 XP_017211118.1  36.404  228 145  0 140  367   97  324
## 3934 NP_001348394.1 XP_017211118.1  38.140  215 132  1 153  367  138  351
## 3935 NP_001348394.1 XP_017211118.1  44.203  138  77  0 232  369   77  214
## 3936 NP_001348394.1 XP_017211118.1  37.037  162 101  1 153  314  194  354
## 3937 NP_001348394.1 NP_001116099.1  44.503  191 106  0 176  366   65  255
## 3938 NP_001348394.1 NP_001116099.1  40.654  214 127  0 153  366   70  283
## 3939 NP_001348394.1 NP_001116099.1  39.252  214 130  0 153  366   98  311
## 3940 NP_001348394.1 NP_001116099.1  42.268  194 112  0 153  346  126  319
## 3941 NP_001348394.1 XP_009299238.1  38.710  248 148  1 123  366   48  295
## 3942 NP_001348394.1 XP_009299238.1  37.963  216 134  0 153  368  110  325
## 3943 NP_001348394.1 XP_009299238.1  38.605  215 132  0 153  367  138  352
## 3944 NP_001348394.1 XP_009299238.1  36.420  162 103  0 153  314  194  355
## 3945 NP_001348394.1 XP_009294085.1  36.201  279 164  2  99  366    7  282
## 3946 NP_001348394.1 XP_009294085.1  39.252  214 130  0 153  366  125  338
## 3947 NP_001348394.1 XP_009294085.1  40.933  193 114  0 174  366  174  366
## 3948 NP_001348394.1 XP_009294085.1  41.718  163  95  0 153  315  209  371
## 3949 NP_001348394.1 XP_009294085.1  38.503  187 115  0 153  339  181  367
## 3950 NP_001348394.1 XP_009289662.1  39.269  219 133  0 148  366  105  323
## 3951 NP_001348394.1 XP_009289662.1  39.252  214 130  0 153  366   54  267
## 3952 NP_001348394.1 XP_009289662.1  40.625  192 114  0 175  366   48  239
## 3953 NP_001348394.1 XP_009289662.1  38.415  164 101  0 148  311  161  324
## 3954 NP_001348394.1 XP_009289662.1  30.159  189 124  2  99  283  140  324
## 3955 NP_001348394.1 XP_009289662.1  35.526   76  49  0 153  228  250  325
## 3956 NP_001348394.1 XP_009299001.2  41.395  215 126  0 153  367   66  280
## 3957 NP_001348394.1 XP_009299001.2  37.190  242 150  1 127  366   10  251
## 3958 NP_001348394.1 XP_009299001.2  37.674  215 133  1 153  367   94  307
## 3959 NP_001348394.1 XP_009299001.2  33.862  189  98  1 153  314  122  310
## 3960 NP_001348394.1 XP_009299001.2  45.238   84  46  0 288  371   33  116
## 3961 NP_001348394.1 XP_009299001.2  35.294   51  32  1 153  203  262  311
## 3962 NP_001348394.1 XP_017210850.1  41.885  191 111  0 174  364   39  229
## 3963 NP_001348394.1 XP_017210850.1  42.487  193 111  0 174  366   11  203
## 3964 NP_001348394.1 XP_017210850.1  43.931  173  97  0 194  366    3  175
## 3965 NP_001348394.1 XP_017210850.1  42.935  184 105  0 153  336   46  229
## 3966 NP_001348394.1 XP_017210850.1  43.836  146  82  0 221  366    2  147
## 3967 NP_001348394.1 XP_017210930.1  37.705  244 144  1 110  353   47  282
## 3968 NP_001348394.1 XP_017210930.1  36.771  223 141  0 144  366  101  323
## 3969 NP_001348394.1 XP_017210930.1  38.140  215 132  1 153  367  138  351
## 3970 NP_001348394.1 XP_017210930.1  42.754  138  79  0 232  369   77  214
## 3971 NP_001348394.1 XP_017210930.1  37.654  162 100  1 153  314  194  354
## 3972 NP_001348394.1 XP_021324960.1  42.130  216 125  0 153  368   91  306
## 3973 NP_001348394.1 XP_021324960.1  40.187  214 128  0 153  366  343  556
## 3974 NP_001348394.1 XP_021324960.1  40.465  215 128  0 153  367  119  333
## 3975 NP_001348394.1 XP_021324960.1  41.709  199 115  1 168  366   51  248
## 3976 NP_001348394.1 XP_021324960.1  37.551  245 149  1 123  367  289  529
## 3977 NP_001348394.1 XP_021324960.1  38.318  214 132  0 153  366   63  276
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## 3978 NP_001348394.1 XP_021324960.1  39.524  210 127  0 153  362  455  664
## 3979 NP_001348394.1 XP_021324960.1  42.786  201 115  0 153  353  287  487
## 3980 NP_001348394.1 XP_021324960.1  38.532  218 134  0 153  370  399  616
## 3981 NP_001348394.1 XP_021324960.1  37.788  217 135  0 153  369  231  447
## 3982 NP_001348394.1 XP_021324960.1  35.981  214 137  0 153  366  427  640
## 3983 NP_001348394.1 XP_021324960.1  35.648  216 139  0 153  368  203  418
## 3984 NP_001348394.1 XP_021324960.1  33.645  214 142  0 153  366  259  472
## 3985 NP_001348394.1 NP_001352876.1  42.991  214 122  0 153  366   88  301
## 3986 NP_001348394.1 NP_001352876.1  40.654  214 127  0 153  366  116  329
## 3987 NP_001348394.1 NP_001352876.1  40.278  216 129  0 153  368  144  359
## 3988 NP_001348394.1 NP_001352876.1  39.252  214 130  0 153  366   60  273
## 3989 NP_001348394.1 NP_001352876.1  40.314  191 114  0 176  366   55  245
## 3990 NP_001348394.1 NP_001352876.1  34.737  190 124  0 153  342  200  389
## 3991 NP_001348394.1 NP_001352876.1  42.029  138  80  0 229  366   52  189
## 3992 NP_001348394.1 NP_001352876.1  36.747  166 103  2 153  317  228  392
## 3993 NP_001348394.1 NP_001352876.1  36.782   87  55  0 280  366   47  133
## 3994 NP_001348394.1 XP_005170442.1  41.121  214 126  0 153  366  144  357
## 3995 NP_001348394.1 XP_005170442.1  40.000  215 129  0 152  366   87  301
## 3996 NP_001348394.1 XP_005170442.1  40.278  216 129  0 153  368  172  387
## 3997 NP_001348394.1 XP_005170442.1  41.837  196 114  0 172  367   79  274
## 3998 NP_001348394.1 XP_005170442.1  38.750  160  98  0 152  311  227  386
## 3999 NP_001348394.1 XP_021331388.1  37.975  237 143  1 121  353   46  282
## 4000 NP_001348394.1 XP_021331388.1  36.564  227 144  0 140  366   97  323
## 4001 NP_001348394.1 XP_021331388.1  38.605  215 131  1 153  367  138  351
## 4002 NP_001348394.1 XP_021331388.1  43.537  147  80  1 226  369   68  214
## 4003 NP_001348394.1 XP_021331388.1  37.654  162 100  1 153  314  194  354
## 4004 NP_001348394.1 XP_017211249.1  37.975  237 143  1 121  353   46  282
## 4005 NP_001348394.1 XP_017211249.1  36.564  227 144  0 140  366   97  323
## 4006 NP_001348394.1 XP_017211249.1  38.605  215 131  1 153  367  138  351
## 4007 NP_001348394.1 XP_017211249.1  43.537  147  80  1 226  369   68  214
## 4008 NP_001348394.1 XP_017211249.1  37.654  162 100  1 153  314  194  354
## 4009 NP_001348394.1 XP_017210837.1  40.081  247 145  3 123  366   50  296
## 4010 NP_001348394.1 XP_017210837.1  41.121  214 126  0 153  366  167  380
## 4011 NP_001348394.1 XP_017210837.1  39.720  214 129  0 153  366  139  352
## 4012 NP_001348394.1 XP_017210837.1  39.583  192 116  0 175  366  133  324
## 4013 NP_001348394.1 XP_017210837.1  34.672  274 171  3  99  368  141  410
## 4014 NP_001348394.1 XP_017210837.1  38.860  193 118  0 175  367  245  437
## 4015 NP_001348394.1 XP_017210837.1  34.568  162 106  0 153  314  279  440
## 4016 NP_001348394.1 XP_017211226.1  39.738  229 137  1 140  368   59  286
## 4017 NP_001348394.1 XP_017211226.1  43.284  201 114  0 153  353   99  299
## 4018 NP_001348394.1 XP_017211226.1  41.361  191 112  0 153  343  127  317
## 4019 NP_001348394.1 XP_021331488.1  42.487  193 111  0 176  368   96  288
## 4020 NP_001348394.1 XP_021331488.1  39.720  214 129  0 153  366  101  314
## 4021 NP_001348394.1 XP_021331488.1  45.455  165  90  0 175  339  151  315
## 4022 NP_001348394.1 XP_021331488.1  43.293  164  93  0 203  366   95  258
## 4023 NP_001348394.1 XP_021331488.1  37.267  161 101  0 153  313  157  317
## 4024 NP_001348394.1 XP_021331488.1  34.862  109  71  0 148  256  208  316
## 4025 NP_001348394.1 NP_001373224.1  40.175  229 137  0 143  371   54  282
## 4026 NP_001348394.1 NP_001373224.1  37.500  208 130  0 159  366   42  249
## 4027 NP_001348394.1 NP_001373224.1  39.151  212 129  0 153  364  120  331
## 4028 NP_001348394.1 NP_001373224.1  34.653  101  66  0 152  252  231  331
## 4029 NP_001348394.1 XP_001338708.3  42.487  193 111  0 176  368   74  266
## 4030 NP_001348394.1 XP_001338708.3  39.720  214 129  0 153  366   79  292
## 4031 NP_001348394.1 XP_001338708.3  45.455  165  90  0 175  339  129  293
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## 4032 NP_001348394.1 XP_001338708.3  43.293  164  93  0 203  366   73  236
## 4033 NP_001348394.1 XP_001338708.3  37.267  161 101  0 153  313  135  295
## 4034 NP_001348394.1 XP_001338708.3  34.862  109  71  0 148  256  186  294
## 4035 NP_001348394.1 XP_021325064.1  41.589  214 125  0 153  366  263  476
## 4036 NP_001348394.1 XP_021325064.1  41.121  214 126  0 153  366  235  448
## 4037 NP_001348394.1 XP_021325064.1  40.187  214 128  0 153  366  319  532
## 4038 NP_001348394.1 XP_021325064.1  41.589  214 125  0 153  366   67  280
## 4039 NP_001348394.1 XP_021325064.1  38.785  214 131  0 153  366  151  364
## 4040 NP_001348394.1 XP_021325064.1  39.535  215 130  0 153  367  123  337
## 4041 NP_001348394.1 XP_021325064.1  32.313  294 184  3  77  366  138  420
## 4042 NP_001348394.1 XP_021325064.1  37.500  168 105  0 199  366   57  224
## 4043 NP_001348394.1 XP_021325064.1  38.365  159  98  0 153  311  375  533
## 4044 NP_001348394.1 XP_021325064.1  33.654  104  69  0 153  256  431  534
## 4045 NP_001348394.1 XP_021327905.1  36.948  249 149  1 118  366   86  326
## 4046 NP_001348394.1 XP_021327905.1  42.408  191 110  0 176  366   52  242
## 4047 NP_001348394.1 XP_021327905.1  40.187  214 128  0 153  366   57  270
## 4048 NP_001348394.1 XP_021327905.1  38.660  194 119  0 153  346  169  362
## 4049 NP_001348394.1 XP_021327905.1  38.636  176 108  0 144  319  188  363
## 4050 NP_001348394.1 XP_021327905.1  38.202   89  55  0 280  368   44  132
## 4051 NP_001348394.1 XP_021327905.1  35.714   84  54  0 153  236  281  364
## 4052 NP_001348394.1 XP_017210371.1  36.948  249 149  1 118  366   86  326
## 4053 NP_001348394.1 XP_017210371.1  42.408  191 110  0 176  366   52  242
## 4054 NP_001348394.1 XP_017210371.1  40.187  214 128  0 153  366   57  270
## 4055 NP_001348394.1 XP_017210371.1  38.660  194 119  0 153  346  169  362
## 4056 NP_001348394.1 XP_017210371.1  38.636  176 108  0 144  319  188  363
## 4057 NP_001348394.1 XP_017210371.1  38.202   89  55  0 280  368   44  132
## 4058 NP_001348394.1 XP_017210371.1  35.714   84  54  0 153  236  281  364
## 4059 NP_001348394.1 XP_017208612.1  36.232  276 160  2  99  366  107  374
## 4060 NP_001348394.1 XP_017208612.1  40.654  214 127  0 153  366   49  262
## 4061 NP_001348394.1 XP_017208612.1  39.720  214 129  0 153  366  105  318
## 4062 NP_001348394.1 XP_017208612.1  39.252  214 130  0 153  366   77  290
## 4063 NP_001348394.1 XP_017208611.1  36.232  276 160  2  99  366  107  374
## 4064 NP_001348394.1 XP_017208611.1  40.654  214 127  0 153  366   49  262
## 4065 NP_001348394.1 XP_017208611.1  39.720  214 129  0 153  366  105  318
## 4066 NP_001348394.1 XP_017208611.1  39.252  214 130  0 153  366   77  290
## 4067 NP_001348394.1 XP_017208849.1  41.589  214 125  0 153  366  263  476
## 4068 NP_001348394.1 XP_017208849.1  41.121  214 126  0 153  366  235  448
## 4069 NP_001348394.1 XP_017208849.1  40.187  214 128  0 153  366  319  532
## 4070 NP_001348394.1 XP_017208849.1  41.589  214 125  0 153  366   67  280
## 4071 NP_001348394.1 XP_017208849.1  38.785  214 131  0 153  366  151  364
## 4072 NP_001348394.1 XP_017208849.1  39.535  215 130  0 153  367  123  337
## 4073 NP_001348394.1 XP_017208849.1  32.313  294 184  3  77  366  138  420
## 4074 NP_001348394.1 XP_017208849.1  38.788  165 101  0 153  317  375  539
## 4075 NP_001348394.1 XP_017208849.1  37.500  168 105  0 199  366   57  224
## 4076 NP_001348394.1 XP_021331152.1  40.984  244 140  2 127  366   57  300
## 4077 NP_001348394.1 XP_021331152.1  44.041  193 108  0 176  368   82  274
## 4078 NP_001348394.1 XP_021331152.1  38.605  215 132  0 153  367  143  357
## 4079 NP_001348394.1 XP_021331152.1  35.043  234 144  2 109  338  127  356
## 4080 NP_001348394.1 XP_021331152.1  32.407  216 146  0  99  314  145  360
## 4081 NP_001348394.1 XP_021331358.1  39.535  215 130  0 153  367  104  318
## 4082 NP_001348394.1 XP_021331358.1  40.179  224 134  0 143  366   66  289
## 4083 NP_001348394.1 XP_021331358.1  36.404  228 144  1 140  367  119  345
## 4084 NP_001348394.1 XP_021331358.1  41.176  170 100  0 197  366   64  233
## 4085 NP_001348394.1 XP_021331358.1  37.037  162 101  1 153  314  188  348
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## 4086 NP_001348394.1 XP_021331358.1  39.286   84  47  1 288  371   47  126
## 4087 NP_001348394.1 XP_021331358.1  33.333   51  33  1 153  203  300  349
## 4088 NP_001348394.1 XP_021328583.1  43.925  214 120  0 153  366  431  644
## 4089 NP_001348394.1 XP_021328583.1  40.625  224 133  0 145  368 1095 1318
## 4090 NP_001348394.1 XP_021328583.1  41.589  214 125  0 153  366  935 1148
## 4091 NP_001348394.1 XP_021328583.1  42.523  214 123  0 153  366  543  756
## 4092 NP_001348394.1 XP_021328583.1  40.654  214 127  0 153  366  375  588
## 4093 NP_001348394.1 XP_021328583.1  41.121  214 126  0 153  366  151  364
## 4094 NP_001348394.1 XP_021328583.1  41.451  193 113  0 174  366  536  728
## 4095 NP_001348394.1 XP_021328583.1  40.271  221 122  2 153  371 1299 1511
## 4096 NP_001348394.1 XP_021328583.1  43.455  191 108  0 176  366   62  252
## 4097 NP_001348394.1 XP_021328583.1  39.252  214 130  0 153  366  823 1036
## 4098 NP_001348394.1 XP_021328583.1  38.785  214 131  0 153  366  347  560
## 4099 NP_001348394.1 XP_021328583.1  41.451  193 113  0 174  366  816 1008
## 4100 NP_001348394.1 XP_021328583.1  38.785  214 131  0 153  366  851 1064
## 4101 NP_001348394.1 XP_021328583.1  35.656  244 129  2 153  368  879 1122
## 4102 NP_001348394.1 XP_021328583.1  38.426  216 133  0 153  368 1243 1458
## 4103 NP_001348394.1 XP_021328583.1  40.476  210 125  0 144  353  170  379
## 4104 NP_001348394.1 XP_021328583.1  40.187  214 128  0 153  366  291  504
## 4105 NP_001348394.1 XP_021328583.1  42.487  193 111  0 174  366  704  896
## 4106 NP_001348394.1 XP_021328583.1  40.513  195 109  1 174  361  760  954
## 4107 NP_001348394.1 XP_021328583.1  41.969  193 112  0 174  366  732  924
## 4108 NP_001348394.1 XP_021328583.1  36.522  230 146  0 137  366 1199 1428
## 4109 NP_001348394.1 XP_021328583.1  43.299  194 108  2 174  366  676  868
## 4110 NP_001348394.1 XP_021328583.1  39.216  204 124  0 163  366 1029 1232
## 4111 NP_001348394.1 XP_021328583.1  39.070  215 131  0 153  367  627  841
## 4112 NP_001348394.1 XP_021328583.1  40.415  193 115  0 174  366  284  476
## 4113 NP_001348394.1 XP_021328583.1  37.281  228 142  1 140  366 1173 1400
## 4114 NP_001348394.1 XP_021328583.1  42.222  180 104  0 174  353  256  435
## 4115 NP_001348394.1 XP_021328583.1  39.216  204 124  0 163  366 1169 1372
## 4116 NP_001348394.1 XP_021328583.1  37.824  193 120  0 174  366  788  980
## 4117 NP_001348394.1 XP_021328583.1  38.318  214 132  0 153  366 1047 1260
## 4118 NP_001348394.1 XP_021328583.1  38.140  215 133  0 153  367  207  421
## 4119 NP_001348394.1 XP_021330458.1  41.121  214 126  0 153  366   89  302
## 4120 NP_001348394.1 XP_021330458.1  41.410  227 132  1 140  366   49  274
## 4121 NP_001348394.1 XP_021330458.1  41.121  214 126  0 153  366  117  330
## 4122 NP_001348394.1 XP_021330458.1  37.313  268 168  0  99  366   91  358
## 4123 NP_001348394.1 XP_021330458.1  42.130  216 125  0 153  368  201  416
## 4124 NP_001348394.1 XP_021330458.1  40.654  214 127  0 153  366  173  386
## 4125 NP_001348394.1 XP_021327156.1  37.226  274 162  2  98  366  118  386
## 4126 NP_001348394.1 XP_021327156.1  41.121  214 126  0 153  366  201  414
## 4127 NP_001348394.1 XP_021327156.1  44.615  195 108  0 172  366   52  246
## 4128 NP_001348394.1 XP_021327156.1  46.667  180  96  0 174  353  250  429
## 4129 NP_001348394.1 XP_021327156.1  40.654  214 127  0 153  366  257  470
## 4130 NP_001348394.1 XP_021327156.1  41.121  214 126  0 153  366   89  302
## 4131 NP_001348394.1 XP_021327156.1  36.986  219 138  0 148  366  112  330
## 4132 NP_001348394.1 XP_021327156.1  38.785  214 131  0 153  366   61  274
## 4133 NP_001348394.1 XP_021327156.1  40.816  196 116  0 153  348  285  480
## 4134 NP_001348394.1 NP_001083040.2  42.523  214 123  0 153  366  150  363
## 4135 NP_001348394.1 NP_001083040.2  39.171  217 130  1 148  362  201  417
## 4136 NP_001348394.1 NP_001083040.2  37.104  221 138  1 146  366   60  279
## 4137 NP_001348394.1 NP_001083040.2  35.165  273 166  4  99  366   69  335
## 4138 NP_001348394.1 NP_001083040.2  42.262  168  96  1 199  366   57  223
## 4139 NP_001348394.1 XP_021325073.1  42.523  214 123  0 153  366  150  363
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## 4140 NP_001348394.1 XP_021325073.1  39.171  217 130  1 148  362  201  417
## 4141 NP_001348394.1 XP_021325073.1  37.104  221 138  1 146  366   60  279
## 4142 NP_001348394.1 XP_021325073.1  35.165  273 166  4  99  366   69  335
## 4143 NP_001348394.1 XP_021325073.1  42.262  168  96  1 199  366   57  223
## 4144 NP_001348394.1 NP_001122163.1  37.391  230 144  0 142  371   32  261
## 4145 NP_001348394.1 XP_017209821.1  40.654  214 127  0 140  353   69  282
## 4146 NP_001348394.1 XP_017209821.1  36.404  228 145  0 140  367   97  324
## 4147 NP_001348394.1 XP_017209821.1  38.140  215 132  1 153  367  138  351
## 4148 NP_001348394.1 XP_017209821.1  44.203  138  77  0 232  369   77  214
## 4149 NP_001348394.1 XP_017209821.1  37.037  162 101  1 153  314  194  354
## 4150 NP_001348394.1 XP_017209820.1  40.654  214 127  0 140  353   69  282
## 4151 NP_001348394.1 XP_017209820.1  36.404  228 145  0 140  367   97  324
## 4152 NP_001348394.1 XP_017209820.1  38.140  215 132  1 153  367  138  351
## 4153 NP_001348394.1 XP_017209820.1  44.203  138  77  0 232  369   77  214
## 4154 NP_001348394.1 XP_017209820.1  37.037  162 101  1 153  314  194  354
## 4155 NP_001348394.1 XP_017210895.1  37.652  247 151  1 123  366   50  296
## 4156 NP_001348394.1 XP_017210895.1  40.639  219 130  0 153  371  167  385
## 4157 NP_001348394.1 XP_017210895.1  38.785  214 131  0 153  366  139  352
## 4158 NP_001348394.1 XP_017210895.1  40.104  192 115  0 175  366  133  324
## 4159 NP_001348394.1 XP_017210895.1  39.062  192 117  0 175  366  217  408
## 4160 NP_001348394.1 XP_017210895.1  38.342  193 119  0 175  367  245  437
## 4161 NP_001348394.1 XP_017210895.1  36.420  162 103  0 153  314  279  440
## 4162 NP_001348394.1 XP_017209848.1  37.247  247 152  1 123  366   50  296
## 4163 NP_001348394.1 XP_017209848.1  37.868  272 161  3  99  366  113  380
## 4164 NP_001348394.1 XP_017209848.1  39.583  192 116  0 175  366  217  408
## 4165 NP_001348394.1 XP_017209848.1  38.860  193 118  0 175  367  245  437
## 4166 NP_001348394.1 XP_017209848.1  36.420  162 103  0 153  314  279  440
## 4167 NP_001348394.1 NP_001278252.1  38.261  230 142  0 137  366   56  285
## 4168 NP_001348394.1 NP_001278252.1  37.566  189 118  0 153  341  128  316
## 4169 NP_001348394.1 NP_001278252.1  35.644  101  65  0 152  252  211  311
## 4170 NP_001348394.1 NP_001012513.2  38.261  230 142  0 137  366   56  285
## 4171 NP_001348394.1 NP_001012513.2  37.566  189 118  0 153  341  128  316
## 4172 NP_001348394.1 NP_001012513.2  35.644  101  65  0 152  252  211  311
## 4173 NP_001348394.1 NP_001108581.1  45.810  179  97  0 176  354   82  260
## 4174 NP_001348394.1 NP_001108581.1  46.951  164  87  0 203  366   81  244
## 4175 NP_001348394.1 NP_001108581.1  39.252  214 122  1 113  326   55  260
## 4176 NP_001348394.1 XP_021326747.1  38.306  248 149  1 123  366   48  295
## 4177 NP_001348394.1 XP_021326747.1  37.037  216 136  0 153  368  110  325
## 4178 NP_001348394.1 XP_021326747.1  38.710  186 114  0 153  338  166  351
## 4179 NP_001348394.1 XP_021326747.1  36.420  162 103  0 153  314  194  355
## 4180 NP_001348394.1 XP_021326747.1  35.780  109  70  0 153  261  250  358
## 4181 NP_001348394.1 NP_001108393.1  41.228  228 131  2 140  367   49  273
## 4182 NP_001348394.1 NP_001108393.1  34.043  235 135  4  90  314   52  276
## 4183 NP_001348394.1 XP_021323164.1  41.204  216 127  0 153  368   79  294
## 4184 NP_001348394.1 XP_021323164.1  39.252  214 130  0 153  366  107  320
## 4185 NP_001348394.1 XP_021323164.1  38.318  214 132  0 153  366  135  348
## 4186 NP_001348394.1 XP_021323164.1  40.526  190 113  0 177  366   75  264
## 4187 NP_001348394.1 XP_021323164.1  43.353  173  98  0 153  325  191  363
## 4188 NP_001348394.1 XP_021323164.1  38.308  201 124  0 153  353  163  363
## 4189 NP_001348394.1 XP_021323164.1  43.662  142  80  0 225  366   67  208
## 4190 NP_001348394.1 XP_021323164.1  24.370  119  82  2  99  213  249  363
## 4191 NP_001348394.1 XP_021323880.1  41.004  239 139  1 130  366  481  719
## 4192 NP_001348394.1 XP_021323880.1  42.991  214 122  0 153  366   71  284
## 4193 NP_001348394.1 XP_021323880.1  43.458  214 121  0 153  366  422  635
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## 4194 NP_001348394.1 XP_021323880.1  42.056  214 124  0 153  366  478  691
## 4195 NP_001348394.1 XP_021323880.1  42.523  214 123  0 153  366  590  803
## 4196 NP_001348394.1 XP_021323880.1  45.078  193 106  0 174  366    8  200
## 4197 NP_001348394.1 XP_021323880.1  36.567  268 170  0  99  366   45  312
## 4198 NP_001348394.1 XP_021323880.1  40.000  215 129  0 153  367  534  748
## 4199 NP_001348394.1 XP_021323880.1  40.930  215 127  0 153  367   15  229
## 4200 NP_001348394.1 XP_021323880.1  44.041  193 108  0 174  366  471  663
## 4201 NP_001348394.1 XP_021323880.1  40.455  220 131  0 147  366  388  607
## 4202 NP_001348394.1 XP_021323880.1  40.654  214 127  0 153  366  127  340
## 4203 NP_001348394.1 XP_021323880.1  39.815  216 130  0 153  368  562  777
## 4204 NP_001348394.1 XP_021323880.1  44.706  170  94  0 197  366    3  172
## 4205 NP_001348394.1 XP_021323880.1  34.836  244 159  0  99  342  564  807
## 4206 NP_001348394.1 XP_021323880.1  34.630  257 125  1 153  366  295  551
## 4207 NP_001348394.1 XP_021323880.1  31.008  258 135  1 153  367  183  440
## 4208 NP_001348394.1 XP_021323880.1  48.951  143  73  0 224  366    2  144
## 4209 NP_001348394.1 XP_021323880.1  41.718  163  95  0 153  315  646  808
## 4210 NP_001348394.1 NP_001353349.1  44.103  195 109  0 172  366   52  246
## 4211 NP_001348394.1 NP_001353349.1  38.326  227 140  0 141  367   49  275
## 4212 NP_001348394.1 NP_001353349.1  40.654  214 127  0 153  366   89  302
## 4213 NP_001348394.1 NP_001353349.1  38.342  193  91  1 153  317  117  309
## 4214 NP_001348394.1 XP_017209933.1  40.807  223 131  1 145  367   91  312
## 4215 NP_001348394.1 XP_017209933.1  43.455  191 107  1 176  366   66  255
## 4216 NP_001348394.1 XP_017209933.1  41.410  227 131  2 140  366   59  283
## 4217 NP_001348394.1 XP_017209933.1  45.399  163  88  1 153  315  155  316
## 4218 NP_001348394.1 XP_017210982.1  42.718  206 118  0 148  353  166  371
## 4219 NP_001348394.1 XP_017210982.1  40.000  215 129  0 153  367  199  413
## 4220 NP_001348394.1 XP_017210982.1  38.723  235 141  1 135  366   66  300
## 4221 NP_001348394.1 XP_017210982.1  39.207  227 138  0 140  366  102  328
## 4222 NP_001348394.1 XP_017210982.1  43.367  196 111  0 173  368   79  274
## 4223 NP_001348394.1 XP_017210982.1  35.496  262 157  3  99  354  173  428
## 4224 NP_001348394.1 XP_017210982.1  33.023  215 144  0  99  313  229  443
## 4225 NP_001348394.1 XP_021331303.1  42.786  201 115  0 153  353  127  327
## 4226 NP_001348394.1 XP_021331303.1  40.741  216 128  0 153  368   99  314
## 4227 NP_001348394.1 XP_021331303.1  38.326  227 139  1 140  366   59  284
## 4228 NP_001348394.1 XP_021331303.1  37.615  218 132  1 151  368   45  258
## 4229 NP_001348394.1 XP_021331303.1  40.314  191 114  0 153  343  155  345
## 4230 NP_001348394.1 XP_021331500.1  39.749  239 136  2 130  367   34  265
## 4231 NP_001348394.1 XP_021331500.1  38.603  272 161  2  99  367  221  489
## 4232 NP_001348394.1 XP_021331500.1  39.269  219 133  0 148  366  186  404
## 4233 NP_001348394.1 XP_021331500.1  42.408  191 110  0 176  366  158  348
## 4234 NP_001348394.1 XP_021331500.1  36.296  270 172  0  99  368  109  378
## 4235 NP_001348394.1 XP_021331500.1  40.654  214 127  0 153  366   79  292
## 4236 NP_001348394.1 XP_021331500.1  33.758  157 104  0 152  308  358  514
## 4237 NP_001348394.1 XP_021331500.1  31.081   74  51  0 152  225  442  515
## 4238 NP_001348394.1 XP_021330459.1  38.554  249 145  1 118  366  367  607
## 4239 NP_001348394.1 XP_021330459.1  42.056  214 124  0 153  366  366  579
## 4240 NP_001348394.1 XP_021330459.1  39.224  232 136  2 141  367  465  696
## 4241 NP_001348394.1 XP_021330459.1  40.278  216 129  0 153  368  422  637
## 4242 NP_001348394.1 XP_021330459.1  42.487  193 111  0 174  366  359  551
## 4243 NP_001348394.1 XP_021330459.1  37.727  220 133  1 153  368  250  469
## 4244 NP_001348394.1 XP_021330459.1  38.785  214 131  0 153  366  110  323
## 4245 NP_001348394.1 XP_021330459.1  38.532  218 130  1 153  366  306  523
## 4246 NP_001348394.1 XP_021330459.1  36.548  197 125  0 170  366   43  239
## 4247 NP_001348394.1 XP_021330459.1  35.514  214 138  0 153  366   82  295
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## 4248 NP_001348394.1 XP_021330459.1  36.486  222 137  1 149  366   46  267
## 4249 NP_001348394.1 XP_021330459.1  42.771  166  91  1 153  314  534  699
## 4250 NP_001348394.1 NP_001025265.3  42.932  191 109  0 176  366   39  229
## 4251 NP_001348394.1 NP_001025265.3  39.815  216 130  0 153  368   44  259
## 4252 NP_001348394.1 NP_001025265.3  41.121  214 126  0 153  366  100  313
## 4253 NP_001348394.1 NP_001025265.3  40.187  214 128  0 153  366   72  285
## 4254 NP_001348394.1 NP_001025265.3  41.121  214 126  0 153  366  156  369
## 4255 NP_001348394.1 NP_001025265.3  40.187  214 128  0 153  366  128  341
## 4256 NP_001348394.1 NP_001025265.3  41.053  190 112  0 153  342  184  373
## 4257 NP_001348394.1 NP_001025265.3  42.222  135  78  0 153  287  240  374
## 4258 NP_001348394.1 NP_001025265.3  34.167  120  79  0 140  259  255  374
## 4259 NP_001348394.1 XP_009294078.1  44.554  202 112  0 153  354  151  352
## 4260 NP_001348394.1 XP_009294078.1  39.252  214 130  0 153  366  207  420
## 4261 NP_001348394.1 XP_009294078.1  37.443  219 137  0 153  371  263  481
## 4262 NP_001348394.1 XP_009294078.1  35.433  254 154  4 113  366   65  308
## 4263 NP_001348394.1 XP_009294078.1  39.683  189 114  0 178  366  148  336
## 4264 NP_001348394.1 XP_009294078.1  37.306  193 121  0 174  366   60  252
## 4265 NP_001348394.1 XP_009294078.1  39.286  168 102  0 199  366   57  224
## 4266 NP_001348394.1 XP_009294078.1  40.000   55  33  0 314  368   60  114
## 4267 NP_001348394.1 NP_001013514.1  36.232  276 160  2  99  366  106  373
## 4268 NP_001348394.1 NP_001013514.1  41.121  214 126  0 153  366   48  261
## 4269 NP_001348394.1 NP_001013514.1  39.252  214 130  0 153  366  104  317
## 4270 NP_001348394.1 NP_001013514.1  38.785  214 131  0 153  366   76  289
## 4271 NP_001348394.1 NP_001013514.1  29.688  192 133  2  98  288  217  407
## 4272 NP_001348394.1 XP_017211198.1  38.934  244 145  1 127  366   22  265
## 4273 NP_001348394.1 XP_017211198.1  36.574  216 137  0 153  368   80  295
## 4274 NP_001348394.1 XP_017211198.1  37.209  215 135  0 153  367  108  322
## 4275 NP_001348394.1 XP_017211198.1  37.037  162 102  0 153  314  164  325
## 4276 NP_001348394.1 XP_017211198.1  35.780  109  70  0 153  261  220  328
## 4277 NP_001348394.1    XP_683662.5  39.720  214 129  0 153  366  114  327
## 4278 NP_001348394.1    XP_683662.5  39.149  235 140  1 135  366   65  299
## 4279 NP_001348394.1    XP_683662.5  39.269  219 133  0 148  366  137  355
## 4280 NP_001348394.1    XP_683662.5  38.725  204 125  0 153  356  170  373
## 4281 NP_001348394.1 XP_021331485.1  39.720  214 129  0 153  366  114  327
## 4282 NP_001348394.1 XP_021331485.1  39.149  235 140  1 135  366   65  299
## 4283 NP_001348394.1 XP_021331485.1  39.269  219 133  0 148  366  137  355
## 4284 NP_001348394.1 XP_021331485.1  38.725  204 125  0 153  356  170  373
## 4285 NP_001348394.1 XP_021327154.1  41.121  214 126  0 153  366   60  273
## 4286 NP_001348394.1 XP_021327154.1  45.026  191 105  0 176  366   55  245
## 4287 NP_001348394.1 XP_021327154.1  40.816  196 116  0 153  348   88  283
## 4288 NP_001348394.1 NP_001120944.1  41.589  214 125  0 153  366   89  302
## 4289 NP_001348394.1 NP_001120944.1  39.640  222 134  0 145  366   53  274
## 4290 NP_001348394.1 NP_001120944.1  39.545  220 133  0 148  367  168  387
## 4291 NP_001348394.1 NP_001120944.1  40.187  214 128  0 153  366  145  358
## 4292 NP_001348394.1 NP_001120944.1  38.785  214 131  0 153  366  117  330
## 4293 NP_001348394.1 NP_001120944.1  41.117  197 116  0 170  366   50  246
## 4294 NP_001348394.1 NP_001120944.1  35.417  192  96  1 153  316  201  392
## 4295 NP_001348394.1 XP_017210204.2  40.086  232 137  2 135  366    4  233
## 4296 NP_001348394.1 XP_017210204.2  44.526  137  76  0 178  314  101  237
## 4297 NP_001348394.1 XP_017210204.2  35.556  135  87  0 152  286  103  237
## 4298 NP_001348394.1 XP_005161011.1  39.450  218 132  0 153  370  137  354
## 4299 NP_001348394.1 XP_005161011.1  42.326  215 123  1 153  366   80  294
## 4300 NP_001348394.1 XP_005161011.1  40.465  215 127  1 153  366   52  266
## 4301 NP_001348394.1 XP_005161011.1  39.791  191 114  1 178  367   49  239
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## 4302 NP_001348394.1 XP_005161011.1  44.848  165  90  1 203  366   46  210
## 4303 NP_001348394.1 XP_009297802.1  34.688  320 180  5  74  366   29  346
## 4304 NP_001348394.1 XP_009297802.1  40.909  220 130  0 148  367  184  403
## 4305 NP_001348394.1 XP_009297802.1  40.187  214 128  0 153  366  161  374
## 4306 NP_001348394.1 XP_009297802.1  43.814  194 109  0 148  341  212  405
## 4307 NP_001348394.1 XP_005170427.2  39.095  243 120  1 153  367   67  309
## 4308 NP_001348394.1 XP_005170427.2  36.916  214 135  0 153  366  123  336
## 4309 NP_001348394.1 XP_005170427.2  38.220  191 118  0 176  366   62  252
## 4310 NP_001348394.1 XP_005170427.2  39.521  167 101  0 200  366   58  224
## 4311 NP_001348394.1 XP_005170427.2  40.789  152  88  1 162  313  218  367
## 4312 NP_001348394.1 XP_005170427.2  37.179   78  49  0 152  229  290  367
## 4313 NP_001348394.1 XP_005174664.1  41.589  214 125  0 153  366   69  282
## 4314 NP_001348394.1 XP_005174664.1  36.139  202 129  0 166  367   54  255
## 4315 NP_001348394.1 XP_005174664.1  37.126  167 105  0 152  318  152  318
## 4316 NP_001348394.1 XP_005174664.1  34.286  175 113  1 194  366   24  198
## 4317 NP_001348394.1 XP_005174664.1  28.358   67  48  0 140  206  252  318
## 4318 NP_001348394.1 XP_017210824.1  40.654  214 127  0 140  353   69  282
## 4319 NP_001348394.1 XP_017210824.1  35.965  228 146  0 140  367   97  324
## 4320 NP_001348394.1 XP_017210824.1  38.140  215 132  1 153  367  138  351
## 4321 NP_001348394.1 XP_017210824.1  43.571  140  79  0 232  371   77  216
## 4322 NP_001348394.1 XP_017210824.1  37.037  162 101  1 153  314  194  354
## 4323 NP_001348394.1 NP_001121721.2  36.948  249 153  2 122  366   50  298
## 4324 NP_001348394.1 NP_001121721.2  39.252  214 130  0 153  366  141  354
## 4325 NP_001348394.1 NP_001121721.2  33.091  275 168  4 101  367  117  383
## 4326 NP_001348394.1 NP_001121721.2  42.604  169  97  0 203  371   79  247
## 4327 NP_001348394.1 NP_001121721.2  37.654  162 101  0 153  314  225  386
## 4328 NP_001348394.1 NP_001121721.2  29.412   51  36  0 153  203  337  387
## 4329 NP_001348394.1 NP_001353568.1  40.789  228 132  1 131  355   73  300
## 4330 NP_001348394.1 NP_001353568.1  40.704  199 118  0 168  366   85  283
## 4331 NP_001348394.1 NP_001353568.1  36.522  230 135  1 148  366  149  378
## 4332 NP_001348394.1 NP_001353568.1  31.481  270 136  1 151  371  331  600
## 4333 NP_001348394.1 NP_001353568.1  33.865  251 145  3 109  338  345  595
## 4334 NP_001348394.1 NP_001353568.1  32.099  243 116  1 174  367  326  568
## 4335 NP_001348394.1 NP_001353568.1  36.316  190 118  1 127  313  409  598
## 4336 NP_001348394.1 XP_021331483.1  44.388  196 108  1 175  369    9  204
## 4337 NP_001348394.1 XP_021331483.1  46.471  170  91  0 197  366    3  172
## 4338 NP_001348394.1 XP_021331483.1  49.650  143  72  0 224  366    2  144
## 4339 NP_001348394.1 XP_021331483.1  39.683  189 106  1 118  306   16  196
## 4340 NP_001348394.1 XP_009299293.1  41.096  219 129  0 148  366  165  383
## 4341 NP_001348394.1 XP_009299293.1  41.584  202 118  0 153  354  114  315
## 4342 NP_001348394.1 XP_009299293.1  37.647  255 159  0  99  353   88  342
## 4343 NP_001348394.1 XP_009299293.1  40.930  215 126  1 153  367  198  411
## 4344 NP_001348394.1 XP_009299293.1  40.594  202 120  0 165  366   70  271
## 4345 NP_001348394.1 XP_009299293.1  39.683  189 113  1 153  341  226  413
## 4346 NP_001348394.1 XP_017211087.1  41.553  219 128  0 148  366   82  300
## 4347 NP_001348394.1 XP_017211087.1  43.284  201 114  0 153  353  115  315
## 4348 NP_001348394.1 XP_017211087.1  38.793  232 141  1 138  368  127  358
## 4349 NP_001348394.1 XP_017211087.1  37.727  220 137  0 148  367  166  385
## 4350 NP_001348394.1 XP_017211087.1  44.578  166  92  0 203  368   81  246
## 4351 NP_001348394.1 XP_017211087.1  31.019  216 149  0  99  314  173  388
## 4352 NP_001348394.1 NP_001314920.1  38.525  244 146  1 127  366   52  295
## 4353 NP_001348394.1 NP_001314920.1  36.574  216 137  0 153  368  110  325
## 4354 NP_001348394.1 NP_001314920.1  36.744  215 136  0 153  367  138  352
## 4355 NP_001348394.1 NP_001314920.1  38.298  188 116  0 151  338  164  351
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## 4356 NP_001348394.1 NP_001314920.1  36.420  162 103  0 153  314  194  355
## 4357 NP_001348394.1 XP_001334166.2  37.652  247 150  1 126  368   56  302
## 4358 NP_001348394.1 XP_001334166.2  38.605  215 132  0 153  367  115  329
## 4359 NP_001348394.1 XP_001334166.2  37.126  167 105  0 148  314  166  332
## 4360 NP_001348394.1 XP_001334166.2  29.412   51  36  0 153  203  283  333
## 4361 NP_001348394.1 XP_017211097.1  40.654  214 127  0 140  353   69  282
## 4362 NP_001348394.1 XP_017211097.1  36.404  228 145  0 140  367   97  324
## 4363 NP_001348394.1 XP_017211097.1  38.140  215 132  1 153  367  138  351
## 4364 NP_001348394.1 XP_017211097.1  44.203  138  77  0 232  369   77  214
## 4365 NP_001348394.1 XP_017211097.1  37.037  162 101  1 153  314  194  354
## 4366 NP_001348394.1 XP_021331405.1  39.338  272 157  2  99  366  101  368
## 4367 NP_001348394.1 XP_021331405.1  35.786  299 185  1  68  366  245  536
## 4368 NP_001348394.1 XP_021331405.1  37.319  276 155  4  99  366  605  870
## 4369 NP_001348394.1 XP_021331405.1  42.056  214 124  0 153  366   43  256
## 4370 NP_001348394.1 XP_021331405.1  37.319  276 157  2  99  366  129  396
## 4371 NP_001348394.1 XP_021331405.1  40.654  214 127  0 153  366  407  620
## 4372 NP_001348394.1 XP_021331405.1  36.861  274 163  3  98  366  296  564
## 4373 NP_001348394.1 XP_021331405.1  41.121  214 126  0 153  366   15  228
## 4374 NP_001348394.1 XP_021331405.1  42.523  214 123  0 153  366   99  312
## 4375 NP_001348394.1 XP_021331405.1  41.121  214 126  0 153  366  211  424
## 4376 NP_001348394.1 XP_021331405.1  40.179  224 133  1 143  366  593  815
## 4377 NP_001348394.1 XP_021331405.1  45.556  180  98  0 174  353    8  187
## 4378 NP_001348394.1 XP_021331405.1  40.654  214 127  0 153  366  239  452
## 4379 NP_001348394.1 XP_021331405.1  33.770  305 187  3  68  368  301  594
## 4380 NP_001348394.1 XP_021331405.1  39.640  222 134  0 145  366   63  284
## 4381 NP_001348394.1 XP_021331405.1  39.004  241 120  1 153  366  714  954
## 4382 NP_001348394.1 XP_021331405.1  39.720  214 128  1 153  366  435  647
## 4383 NP_001348394.1 XP_021331405.1  43.529  170  96  0 197  366    3  172
## 4384 NP_001348394.1 XP_021331405.1  36.948  249 148  3  99  343  716  959
## 4385 NP_001348394.1 XP_021331405.1  44.056  143  80  0 224  366    2  144
## 4386 NP_001348394.1 XP_009301296.1  41.589  214 125  0 153  366  114  327
## 4387 NP_001348394.1 XP_009301296.1  40.933  193 114  0 174  366   51  243
## 4388 NP_001348394.1 XP_009301296.1  37.850  214 133  0 153  366  170  383
## 4389 NP_001348394.1 XP_009301296.1  40.206  194 116  0 174  367  219  412
## 4390 NP_001348394.1 XP_009301296.1  38.318  214 132  0 153  366   58  271
## 4391 NP_001348394.1 XP_009301296.1  37.850  214 133  0 153  366   86  299
## 4392 NP_001348394.1 XP_009301296.1  37.870  169 105  0 174  342  247  415
## 4393 NP_001348394.1 XP_009301296.1  38.312  154  95  0 162  315  263  416
## 4394 NP_001348394.1 XP_009301295.1  41.589  214 125  0 153  366  126  339
## 4395 NP_001348394.1 XP_009301295.1  35.827  254 160  1 116  366    2  255
## 4396 NP_001348394.1 XP_009301295.1  37.850  214 133  0 153  366  182  395
## 4397 NP_001348394.1 XP_009301295.1  40.206  194 116  0 174  367  231  424
## 4398 NP_001348394.1 XP_009301295.1  38.318  214 132  0 153  366   70  283
## 4399 NP_001348394.1 XP_009301295.1  37.850  214 133  0 153  366   98  311
## 4400 NP_001348394.1 XP_009301295.1  37.870  169 105  0 174  342  259  427
## 4401 NP_001348394.1 XP_009301295.1  38.312  154  95  0 162  315  275  428
## 4402 NP_001348394.1 XP_009299259.1  42.991  214 122  0 153  366  114  327
## 4403 NP_001348394.1 XP_009299259.1  39.726  219 132  0 153  371   86  304
## 4404 NP_001348394.1 XP_009299259.1  39.691  194 117  0 175  368   80  273
## 4405 NP_001348394.1 XP_009299259.1  34.109  258 159  5  99  351   88  339
## 4406 NP_001348394.1 XP_002667484.1  34.228  298 191  2  74  366   36  333
## 4407 NP_001348394.1 XP_002667484.1  40.994  161  95  0 153  313  176  336
## 4408 NP_001348394.1 NP_001103309.1  40.741  216 124  2 153  366   71  284
## 4409 NP_001348394.1 NP_001103309.1  45.087  173  95  0 174  346  120  292
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## 4410 NP_001348394.1 NP_001103309.1  42.487  193 107  2 176  366   66  256
## 4411 NP_001348394.1 NP_001103309.1  39.521  167 101  0 200  366   62  228
## 4412 NP_001348394.1 NP_001103309.1  41.818  110  64  0 153  262  183  292
## 4413 NP_001348394.1 NP_001103309.1  41.379   87  47  1 267  353   49  131
## 4414 NP_001348394.1 XP_021327909.1  40.654  214 127  0 153  366   60  273
## 4415 NP_001348394.1 XP_021327909.1  45.026  191 105  0 176  366   55  245
## 4416 NP_001348394.1 XP_021327909.1  39.474  190 115  0 153  342   88  277
## 4417 NP_001348394.1 XP_021327909.1  40.580  138  82  0 229  366   52  189
## 4418 NP_001348394.1 XP_021327909.1  41.379   87  51  0 280  366   47  133
## 4419 NP_001348394.1 XP_009301868.1  35.821  268 172  0  99  366   93  360
## 4420 NP_001348394.1 XP_009301868.1  39.640  222 134  0 146  367   84  305
## 4421 NP_001348394.1 XP_009301868.1  43.077  195 111  0 174  368   84  278
## 4422 NP_001348394.1 XP_009301868.1  32.000  275 171  2  99  365  121  387
## 4423 NP_001348394.1 XP_003198250.1  39.623  212 124  1 155  366   38  245
## 4424 NP_001348394.1 XP_003198250.1  40.526  190 113  0 153  342   60  249
## 4425 NP_001348394.1 XP_003198250.1  42.073  164  95  0 204  367   55  218
## 4426 NP_001348394.1 XP_003198250.1  42.945  163  93  0 153  315   88  250
## 4427 NP_001348394.1 XP_003198589.1  41.304  230 124  3 139  367  218  437
## 4428 NP_001348394.1 XP_003198589.1  38.739  222 130  1 153  368  105  326
## 4429 NP_001348394.1 XP_003198589.1  34.783  253 131  1 153  371  161  413
## 4430 NP_001348394.1 XP_003198589.1  37.500  216 124  2 162  366   53  268
## 4431 NP_001348394.1 XP_003198589.1  37.850  214 133  0 153  366  279  492
## 4432 NP_001348394.1 XP_003198589.1  42.169  166  96  0 203  368   71  236
## 4433 NP_001348394.1 XP_003198589.1  36.316  190 121  0 153  342  307  496
## 4434 NP_001348394.1 XP_003198589.1  33.333   87  58  0 144  230  410  496
## 4435 NP_001348394.1 NP_001124102.1  39.252  214 130  0 153  366   15  228
## 4436 NP_001348394.1 NP_001124102.1  39.896  193 116  0 174  366    8  200
## 4437 NP_001348394.1 NP_001124102.1  37.850  214 130  1 129  339   16  229
## 4438 NP_001348394.1 NP_001124102.1  41.176  170 100  0 197  366    3  172
## 4439 NP_001348394.1 NP_001124102.1  40.559  143  85  0 224  366    2  144
## 4440 NP_001348394.1 NP_001124102.1  42.424   33  19  0 336  368    2   34
## 4441 NP_001348394.1 NP_001124121.1  39.252  214 130  0 153  366   15  228
## 4442 NP_001348394.1 NP_001124121.1  39.896  193 116  0 174  366    8  200
## 4443 NP_001348394.1 NP_001124121.1  37.850  214 130  1 129  339   16  229
## 4444 NP_001348394.1 NP_001124121.1  41.176  170 100  0 197  366    3  172
## 4445 NP_001348394.1 NP_001124121.1  40.559  143  85  0 224  366    2  144
## 4446 NP_001348394.1 NP_001124121.1  42.424   33  19  0 336  368    2   34
## 4447 NP_001348394.1 XP_021325334.1  42.523  214 123  0 153  366  595  808
## 4448 NP_001348394.1 XP_021325334.1  37.143  245 147  1 130  367  509  753
## 4449 NP_001348394.1 XP_021325334.1  40.415  193 115  0 176  368  534  726
## 4450 NP_001348394.1 XP_021325334.1  33.962  265 159  2 110  366   61  317
## 4451 NP_001348394.1 XP_021325334.1  38.318  214 132  0 153  366  651  864
## 4452 NP_001348394.1 XP_021325334.1  39.252  214 130  0 153  366  567  780
## 4453 NP_001348394.1 XP_021325334.1  39.175  194 118  0 173  366   40  233
## 4454 NP_001348394.1 XP_021325334.1  40.000  195 117  0 174  368  209  403
## 4455 NP_001348394.1 XP_021325334.1  38.342  193 119  0 174  366  700  892
## 4456 NP_001348394.1 XP_021325334.1  35.349  215 139  0 152  366   47  261
## 4457 NP_001348394.1 XP_021325334.1  32.210  267 176  1 105  366  430  696
## 4458 NP_001348394.1 XP_021325334.1  31.963  219 149  0 148  366  239  457
## 4459 NP_001348394.1 XP_021325334.1  38.462  169 104  0 174  342  728  896
## 4460 NP_001348394.1 XP_021325334.1  36.269  193 123  0 174  366  181  373
## 4461 NP_001348394.1 XP_021325334.1  30.651  261 130  3 153  366  412  668
## 4462 NP_001348394.1 XP_021325334.1  37.662  154  96  0 162  315  744  897
## 4463 NP_001348394.1 XP_021325334.1  35.542  166 107  0 148  313  295  460
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## 4464 NP_001348394.1 XP_017211883.2  41.121  214 126  0 153  366   24  237
## 4465 NP_001348394.1 XP_017211883.2  37.963  216 134  0 153  368   52  267
## 4466 NP_001348394.1 XP_017211883.2  39.720  214 129  0 153  366  108  321
## 4467 NP_001348394.1 XP_017211883.2  41.451  193 113  0 174  366  157  349
## 4468 NP_001348394.1 XP_017211883.2  42.408  191 110  0 176  366   19  209
## 4469 NP_001348394.1 XP_017211883.2  36.986  219 138  0 148  366   75  293
## 4470 NP_001348394.1 XP_017211883.2  36.842  190 120  0 153  342  164  353
## 4471 NP_001348394.1 XP_017211883.2  42.331  163  94  0 153  315  192  354
## 4472 NP_001348394.1 XP_017211883.2  40.288  139  83  0 228  366   15  153
## 4473 NP_001348394.1 XP_017211883.2  32.609   92  62  0 140  231  263  354
## 4474 NP_001348394.1 XP_017211082.1  42.564  195 112  0 174  368  108  302
## 4475 NP_001348394.1 XP_017211082.1  38.605  215 132  0 153  367  115  329
## 4476 NP_001348394.1 XP_017211082.1  36.527  167 106  0 148  314  166  332
## 4477 NP_001348394.1 XP_021330478.1  42.056  214 124  0 153  366   51  264
## 4478 NP_001348394.1 XP_021330478.1  39.535  215 129  1 153  366  448  662
## 4479 NP_001348394.1 XP_021330478.1  41.589  214 125  0 153  366  191  404
## 4480 NP_001348394.1 XP_021330478.1  39.720  214 129  0 153  366  135  348
## 4481 NP_001348394.1 XP_021330478.1  39.056  233 136  2 140  366  318  550
## 4482 NP_001348394.1 XP_021330478.1  39.720  214 129  0 153  366   79  292
## 4483 NP_001348394.1 XP_021330478.1  42.487  193 111  0 174  366   16  208
## 4484 NP_001348394.1 XP_021330478.1  38.889  216 132  0 153  368  107  322
## 4485 NP_001348394.1 XP_021330478.1  39.070  215 131  0 153  367   23  237
## 4486 NP_001348394.1 XP_021330478.1  39.252  214 130  0 153  366  219  432
## 4487 NP_001348394.1 XP_021330478.1  39.252  214 130  0 153  366  477  690
## 4488 NP_001348394.1 XP_021330478.1  38.785  214 131  0 153  366  533  746
## 4489 NP_001348394.1 XP_021330478.1  39.252  214 130  0 153  366  505  718
## 4490 NP_001348394.1 XP_021330478.1  39.303  201 122  0 153  353  163  363
## 4491 NP_001348394.1 XP_021330478.1  42.458  179 103  0 188  366    2  180
## 4492 NP_001348394.1 XP_021330478.1  33.871  248 130  1 153  366  247  494
## 4493 NP_001348394.1 XP_021330478.1  39.474  190 115  0 153  342  561  750
## 4494 NP_001348394.1 XP_009294086.1  45.078  193 106  0 174  366   79  271
## 4495 NP_001348394.1 XP_009294086.1  39.252  214 130  0 153  366  114  327
## 4496 NP_001348394.1 XP_009294086.1  40.933  193 114  0 174  366  163  355
## 4497 NP_001348394.1 XP_009294086.1  41.667  168  98  0 199  366   76  243
## 4498 NP_001348394.1 XP_009294086.1  41.718  163  95  0 153  315  198  360
## 4499 NP_001348394.1 XP_009294086.1  38.503  187 115  0 153  339  170  356
## 4500 NP_001348394.1 XP_009294086.1  42.958  142  81  0 227  368   76  217
## 4501 NP_001348394.1 XP_009297410.1  41.121  214 126  0 153  366  141  354
## 4502 NP_001348394.1 XP_009297410.1  40.465  215 128  0 152  366   84  298
## 4503 NP_001348394.1 XP_009297410.1  39.720  214 129  0 153  366   57  270
## 4504 NP_001348394.1 XP_009297410.1  38.356  219 107  1 176  366   24  242
## 4505 NP_001348394.1 XP_009297410.1  39.720  214 129  0 153  366  197  410
## 4506 NP_001348394.1 XP_009297410.1  41.451  193 113  0 174  366  246  438
## 4507 NP_001348394.1 XP_009297410.1  40.828  169 100  0 174  342  274  442
## 4508 NP_001348394.1 XP_009297410.1  41.549  142  83  0 174  315  302  443
## 4509 NP_001348394.1 XP_009297410.1  41.481  135  79  0 234  368   26  160
## 4510 NP_001348394.1 XP_009297410.1  31.250   80  55  0 152  231  364  443
## 4511 NP_001348394.1 NP_001103195.1  41.667  216 126  0 153  368   81  296
## 4512 NP_001348394.1 NP_001103195.1  41.885  191 111  0 176  366   76  266
## 4513 NP_001348394.1 NP_001103195.1  41.579  190 111  0 153  342  109  298
## 4514 NP_001348394.1 NP_001103195.1  35.321  218 137  2  99  314   83  298
## 4515 NP_001348394.1 XP_021327024.1  39.655  232 138  2 135  366    4  233
## 4516 NP_001348394.1 XP_021327024.1  43.796  137  77  0 178  314  101  237
## 4517 NP_001348394.1 XP_021327024.1  35.556  135  87  0 152  286  103  237
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## 4518 NP_001348394.1 XP_021323166.1  40.000  215 129  0 153  367   69  283
## 4519 NP_001348394.1 XP_021323166.1  40.496  242 116  3 153  366   13  254
## 4520 NP_001348394.1 XP_021323166.1  40.206  194 116  0 173  366    5  198
## 4521 NP_001348394.1 XP_021323166.1  36.269  193  95  2 153  317   97  289
## 4522 NP_001348394.1 XP_021331135.1  42.991  214 122  0 140  353   71  284
## 4523 NP_001348394.1 XP_021331135.1  43.523  193 109  0 174  366   77  269
## 4524 NP_001348394.1 XP_021331135.1  39.545  220 133  0 148  367  135  354
## 4525 NP_001348394.1 XP_021331135.1  41.885  191 111  0 176  366   51  241
## 4526 NP_001348394.1 XP_021331135.1  35.802  162 104  0 153  314  196  357
## 4527 NP_001348394.1 XP_021331135.1  33.962   53  35  0 316  368   51  103
## 4528 NP_001348394.1 XP_021323165.1  40.000  215 129  0 153  367  134  348
## 4529 NP_001348394.1 XP_021323165.1  40.496  242 116  3 153  366   78  319
## 4530 NP_001348394.1 XP_021323165.1  40.206  194 116  0 173  366   70  263
## 4531 NP_001348394.1 XP_021323165.1  36.269  193  95  2 153  317  162  354
## 4532 NP_001348394.1 XP_002661922.1  40.930  215 126  1 153  367  119  332
## 4533 NP_001348394.1 XP_002661922.1  39.252  214 130  0 153  366   91  304
## 4534 NP_001348394.1 XP_002661922.1  40.625  192 114  0 176  367   86  277
## 4535 NP_001348394.1 XP_002661922.1  35.450  189 121  1 153  341  175  362
## 4536 NP_001348394.1 XP_002661922.1  51.376  109  53  0 260  368   86  194
## 4537 NP_001348394.1 XP_002661922.1  34.946  186 119  2 129  313  178  362
## 4538 NP_001348394.1 XP_021331461.1  40.930  215 126  1 153  367  119  332
## 4539 NP_001348394.1 XP_021331461.1  39.252  214 130  0 153  366   91  304
## 4540 NP_001348394.1 XP_021331461.1  40.625  192 114  0 176  367   86  277
## 4541 NP_001348394.1 XP_021331461.1  35.450  189 121  1 153  341  175  362
## 4542 NP_001348394.1 XP_021331461.1  51.376  109  53  0 260  368   86  194
## 4543 NP_001348394.1 XP_021331461.1  34.946  186 119  2 129  313  178  362
## 4544 NP_001348394.1 NP_001107943.1  42.056  214 124  0 153  366   65  278
## 4545 NP_001348394.1 NP_001107943.1  41.121  214 126  0 153  366   93  306
## 4546 NP_001348394.1 NP_001107943.1  41.121  214 126  0 153  366  177  390
## 4547 NP_001348394.1 NP_001107943.1  40.838  191 113  0 178  368   62  252
## 4548 NP_001348394.1 NP_001107943.1  40.187  214 128  0 153  366  149  362
## 4549 NP_001348394.1 NP_001107943.1  40.654  214 127  0 153  366  121  334
## 4550 NP_001348394.1 NP_001107943.1  41.040  173 102  0 194  366   50  222
## 4551 NP_001348394.1 NP_001107943.1  40.625   96  57  0 271  366   43  138
## 4552 NP_001348394.1 XP_017211081.1  39.367  221 134  0 148  368  144  364
## 4553 NP_001348394.1 XP_017211081.1  43.719  199 106  2 174  366  108  306
## 4554 NP_001348394.1 XP_017211081.1  38.605  215 132  0 153  367  177  391
## 4555 NP_001348394.1 XP_017211081.1  39.535  172  98  1 203  368   81  252
## 4556 NP_001348394.1 XP_017211081.1  36.810  163 103  0 152  314  232  394
## 4557 NP_001348394.1 XP_005161014.1  37.963  216 131  1 154  369   60  272
## 4558 NP_001348394.1 XP_005161014.1  41.935  186 108  0 153  338   84  269
## 4559 NP_001348394.1 XP_017211187.1  38.367  245 147  1 126  366   56  300
## 4560 NP_001348394.1 XP_017211187.1  41.026  195 115  0 174  368  164  358
## 4561 NP_001348394.1 XP_017211187.1  37.727  220 137  0 148  367  166  385
## 4562 NP_001348394.1 XP_017211187.1  42.771  166  95  0 203  368   81  246
## 4563 NP_001348394.1 XP_017211187.1  32.407  216 146  0  99  314  173  388
## 4564 NP_001348394.1 XP_021324487.1  42.056  214 124  0 153  366   64  277
## 4565 NP_001348394.1 XP_021324487.1  41.121  214 126  0 153  366   92  305
## 4566 NP_001348394.1 XP_021324487.1  41.121  214 126  0 153  366  176  389
## 4567 NP_001348394.1 XP_021324487.1  41.361  191 112  0 178  368   61  251
## 4568 NP_001348394.1 XP_021324487.1  40.187  214 128  0 153  366  148  361
## 4569 NP_001348394.1 XP_021324487.1  41.040  173 102  0 194  366   49  221
## 4570 NP_001348394.1 XP_021324487.1  40.625   96  57  0 271  366   42  137
## 4571 NP_001348394.1 NP_001104560.1  41.294  201 118  0 166  366   44  244
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## 4572 NP_001348394.1 NP_001104560.1  34.364  291 160  5  77  364    8  270
## 4573 NP_001348394.1 NP_001104560.1  30.544  239 131  2  70  308   67  270
## 4574 NP_001348394.1 NP_001104560.1  45.570   79  43  0 290  368   56  134
## 4575 NP_001348394.1 XP_009299297.1  40.741  216 128  0 153  368   81  296
## 4576 NP_001348394.1 XP_009299297.1  37.004  227 133  2 116  342   82  298
## 4577 NP_001348394.1 XP_021330444.1  40.654  214 127  0 153  366   23  236
## 4578 NP_001348394.1 XP_021330444.1  43.455  191 108  0 176  366   18  208
## 4579 NP_001348394.1 XP_021330444.1  45.087  173  95  0 194  366    8  180
## 4580 NP_001348394.1 XP_021330444.1  39.474  190 115  0 153  342   51  240
## 4581 NP_001348394.1 XP_021330444.1  40.741  135  80  0 153  287  107  241
## 4582 NP_001348394.1 XP_009298135.1  40.654  214 127  0 153  366   23  236
## 4583 NP_001348394.1 XP_009298135.1  43.455  191 108  0 176  366   18  208
## 4584 NP_001348394.1 XP_009298135.1  45.087  173  95  0 194  366    8  180
## 4585 NP_001348394.1 XP_009298135.1  39.474  190 115  0 153  342   51  240
## 4586 NP_001348394.1 XP_009298135.1  40.741  135  80  0 153  287  107  241
## 4587 NP_001348394.1 XP_005168174.1  40.930  215 126  1 153  367  117  330
## 4588 NP_001348394.1 XP_005168174.1  39.252  214 130  0 153  366   89  302
## 4589 NP_001348394.1 XP_005168174.1  38.647  207 127  0 161  367   69  275
## 4590 NP_001348394.1 XP_005168174.1  35.450  189 121  1 153  341  173  360
## 4591 NP_001348394.1 XP_005168174.1  51.402  107  52  0 262  368   86  192
## 4592 NP_001348394.1 XP_005168174.1  34.946  186 119  2 129  313  176  360
## 4593 NP_001348394.1 XP_009294081.2  41.553  219 128  0 148  366  174  392
## 4594 NP_001348394.1 XP_009294081.2  39.720  214 129  0 153  366  123  336
## 4595 NP_001348394.1 XP_009294081.2  39.252  214 130  0 153  366   95  308
## 4596 NP_001348394.1 XP_009294081.2  38.785  214 131  0 153  366   67  280
## 4597 NP_001348394.1 XP_009294081.2  38.860  193 118  0 176  368   62  254
## 4598 NP_001348394.1 XP_009294081.2  41.212  165  97  0 153  317  235  399
## 4599 NP_001348394.1 XP_009294081.2  36.310  168 107  0 199  366   57  224
## 4600 NP_001348394.1 XP_021324489.1  42.056  214 124  0 153  366   15  228
## 4601 NP_001348394.1 XP_021324489.1  41.121  214 126  0 153  366   43  256
## 4602 NP_001348394.1 XP_021324489.1  41.121  214 126  0 153  366  127  340
## 4603 NP_001348394.1 XP_021324489.1  41.146  192 113  0 177  368   11  202
## 4604 NP_001348394.1 XP_021324489.1  40.187  214 128  0 153  366   99  312
## 4605 NP_001348394.1 XP_021324489.1  41.420  169  99  0 198  366    4  172
## 4606 NP_001348394.1 XP_021324489.1  41.549  142  83  0 225  366    3  144
## 4607 NP_001348394.1 XP_021324420.1  39.252  214 130  0 153  366  115  328
## 4608 NP_001348394.1 XP_021324420.1  37.500  224 140  0 143  366   49  272
## 4609 NP_001348394.1 XP_021324420.1  36.885  244 148  2  99  339   89  329
## 4610 NP_001348394.1 XP_021324420.1  39.344   61  37  0 308  368   74  134
## 4611 NP_001348394.1 XP_021324519.1  42.056  214 124  0 153  366   58  271
## 4612 NP_001348394.1 XP_021324519.1  41.969  193 112  0 174  366   51  243
## 4613 NP_001348394.1 XP_021324519.1  42.945  163  93  0 153  315  114  276
## 4614 NP_001348394.1 XP_005161013.1  37.963  216 131  1 154  369   81  293
## 4615 NP_001348394.1 XP_005161013.1  41.935  186 108  0 153  338  105  290
## 4616 NP_001349068.1 XP_021331369.1  54.198  262 120  0  58  319   23  284
## 4617 NP_001349068.1 XP_021331369.1  53.053  262 123  0  58  319   79  340
## 4618 NP_001349068.1 XP_021331369.1  51.953  256 123  0  60  315   53  308
## 4619 NP_001349068.1 XP_021331369.1  52.756  254 120  0  58  311  107  360
## 4620 NP_001349068.1 XP_021331369.1  53.386  251 117  0  65  315    2  252
## 4621 NP_001349068.1 XP_021331369.1  53.000  200  94  0  58  257  163  362
## 4622 NP_001349068.1 XP_021331369.1  48.810   84  43  0 232  315    1   84
## 4623 NP_001349068.1 XP_021330855.1  55.814  258 114  0  58  315   95  352
## 4624 NP_001349068.1 XP_021330855.1  49.275  276 134  1  44  313  159  434
## 4625 NP_001349068.1 XP_021330855.1  50.365  274 135  1  58  330   39  312
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## 4626 NP_001349068.1 XP_021330855.1  49.813  267 134  0  49  315    2  268
## 4627 NP_001349068.1 XP_021330855.1  48.188  276 137  1  47  316  134  409
## 4628 NP_001349068.1 XP_021330855.1  50.775  258 127  0  58  315   67  324
## 4629 NP_001349068.1 XP_021330855.1  48.756  201 103  0  58  258  235  435
## 4630 NP_001349068.1 XP_021330855.1  51.562   64  31  0 256  319   13   76
## 4631 NP_001349068.1 XP_017211154.1  49.013  304 152  2  33  333   33  336
## 4632 NP_001349068.1 XP_017211154.1  51.986  277 132  1  58  333  116  392
## 4633 NP_001349068.1 XP_017211154.1  54.651  258 117  0  58  315  144  401
## 4634 NP_001349068.1 XP_017211154.1  55.039  258 116  0  58  315   32  289
## 4635 NP_001349068.1 XP_017211154.1  53.101  258 121  0  58  315   88  345
## 4636 NP_001349068.1 XP_017211154.1  54.264  258 118  0  58  315  172  429
## 4637 NP_001349068.1 XP_017211154.1  53.876  258 119  0  58  315    4  261
## 4638 NP_001349068.1 XP_017211154.1  50.965  259 127  0  58  316  228  486
## 4639 NP_001349068.1 XP_017211154.1  50.781  256 126  0  58  313  256  511
## 4640 NP_001349068.1 XP_017211154.1  54.113  231 106  0  85  315    3  233
## 4641 NP_001349068.1 XP_017211154.1  52.451  204  97  0 112  315    2  205
## 4642 NP_001349068.1 XP_017211154.1  52.308   65  31  0 251  315    1   65
## 4643 NP_001349068.1 XP_021331294.1  55.212  259 116  0  58  316  145  403
## 4644 NP_001349068.1 XP_021331294.1  51.264  277 134  1  58  333   89  365
## 4645 NP_001349068.1 XP_021331294.1  53.101  258 121  0  58  315   61  318
## 4646 NP_001349068.1 XP_021331294.1  52.713  258 122  0  58  315    5  262
## 4647 NP_001349068.1 XP_021331294.1  47.039  304 158  2  33  333    6  309
## 4648 NP_001349068.1 XP_021331294.1  50.400  250 123  1  82  330    1  250
## 4649 NP_001349068.1 XP_021331294.1  50.920  163  80  0  58  220  257  419
## 4650 NP_001349068.1 XP_021331294.1  47.706  109  57  0  58  166  313  421
## 4651 NP_001349068.1 XP_021328503.1  53.333  270 126  0  50  319  193  462
## 4652 NP_001349068.1 XP_021328503.1  54.054  259 119  0  58  316  145  403
## 4653 NP_001349068.1 XP_021328503.1  49.281  278 141  0  38  315   13  290
## 4654 NP_001349068.1 XP_021328503.1  52.326  258 123  0  58  315   61  318
## 4655 NP_001349068.1 XP_021328503.1  50.775  258 127  0  58  315  117  374
## 4656 NP_001349068.1 XP_021328503.1  51.550  258 125  0  58  315    5  262
## 4657 NP_001349068.1 XP_021328503.1  52.564  234 111  0  82  315    1  234
## 4658 NP_001349068.1 XP_021328503.1  51.948  231 111  0  58  288  257  487
## 4659 NP_001349068.1 XP_021331184.1  54.580  262 119  0  58  319  134  395
## 4660 NP_001349068.1 XP_021331184.1  52.896  259 122  0  58  316   78  336
## 4661 NP_001349068.1 XP_021331184.1  53.101  258 121  0  58  315   22  279
## 4662 NP_001349068.1 XP_021331184.1  52.529  257 122  0  58  314  218  474
## 4663 NP_001349068.1 XP_021331184.1  51.550  258 125  0  58  315  190  447
## 4664 NP_001349068.1 XP_021331184.1  51.394  251 122  0  65  315    1  251
## 4665 NP_001349068.1 XP_021331184.1  49.606  254 128  0  58  311  246  499
## 4666 NP_001349068.1 XP_021328508.1  52.963  270 127  0  50  319  193  462
## 4667 NP_001349068.1 XP_021328508.1  54.054  259 119  0  58  316  145  403
## 4668 NP_001349068.1 XP_021328508.1  49.281  278 141  0  38  315   13  290
## 4669 NP_001349068.1 XP_021328508.1  52.326  258 123  0  58  315   61  318
## 4670 NP_001349068.1 XP_021328508.1  50.775  258 127  0  58  315  117  374
## 4671 NP_001349068.1 XP_021328508.1  51.550  258 125  0  58  315    5  262
## 4672 NP_001349068.1 XP_021328508.1  52.564  234 111  0  82  315    1  234
## 4673 NP_001349068.1 XP_021328508.1  52.814  231 109  0  58  288  257  487
## 4674 NP_001349068.1 XP_021326559.1  53.488  258 120  0  58  315   23  280
## 4675 NP_001349068.1 XP_021326559.1  54.198  262 120  0  58  319  107  368
## 4676 NP_001349068.1 XP_021326559.1  51.825  274 131  1  58  330   79  352
## 4677 NP_001349068.1 XP_021326559.1  52.191  251 120  0  65  315    2  252
## 4678 NP_001349068.1 XP_021326559.1  52.093  215 103  0  58  272  163  377
## 4679 NP_001349068.1 XP_021326559.1  57.857  140  59  0 176  315    1  140
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## 4680 NP_001349068.1 XP_021331301.1  53.817  262 121  0  58  319   61  322
## 4681 NP_001349068.1 XP_021331301.1  54.440  259 118  0  58  316    5  263
## 4682 NP_001349068.1 XP_021331301.1  53.488  258 120  0  58  315  145  402
## 4683 NP_001349068.1 XP_021331301.1  51.550  258 125  0  58  315  117  374
## 4684 NP_001349068.1 XP_021331301.1  51.709  234 113  0  82  315    1  234
## 4685 NP_001349068.1 XP_021331301.1  52.000  175  84  0  58  232  229  403
## 4686 NP_001349068.1 XP_021331368.1  52.273  264 126  0  50  313    9  272
## 4687 NP_001349068.1 XP_021331368.1  52.326  258 123  0  58  315   73  330
## 4688 NP_001349068.1 XP_021331368.1  49.057  265 135  0  46  310   89  353
## 4689 NP_001349068.1 XP_021331368.1  50.391  256 127  0  58  313  157  412
## 4690 NP_001349068.1 XP_021331368.1  52.049  244 117  0  70  313    1  244
## 4691 NP_001349068.1 XP_021331368.1  47.232  271 143  0  46  316  117  387
## 4692 NP_001349068.1 XP_021331368.1  47.761  201 105  0  58  258  213  413
## 4693 NP_001349068.1 XP_021331368.1  50.000  162  81  0 154  315    1  162
## 4694 NP_001349068.1 XP_021331448.1  53.817  262 121  0  58  319    5  266
## 4695 NP_001349068.1 XP_021331448.1  53.488  258 120  0  58  315  145  402
## 4696 NP_001349068.1 XP_021331448.1  53.696  257 119  0  60  316   91  347
## 4697 NP_001349068.1 XP_021331448.1  54.264  258 118  0  58  315  173  430
## 4698 NP_001349068.1 XP_021331448.1  51.938  258 124  0  58  315  117  374
## 4699 NP_001349068.1 XP_021331448.1  53.101  258 121  0  58  315  229  486
## 4700 NP_001349068.1 XP_021331448.1  52.713  258 122  0  58  315   61  318
## 4701 NP_001349068.1 XP_021331448.1  53.876  258 119  0  58  315  257  514
## 4702 NP_001349068.1 XP_021331448.1  51.172  256 125  0  60  315   35  290
## 4703 NP_001349068.1 XP_021331448.1  51.938  258 124  0  58  315  201  458
## 4704 NP_001349068.1 XP_021331448.1  49.630  270 136  0  46  315  273  542
## 4705 NP_001349068.1 XP_021331448.1  54.936  233 105  0  58  290  313  545
## 4706 NP_001349068.1 XP_021331448.1  52.137  234 112  0  82  315    1  234
## 4707 NP_001349068.1 XP_021331448.1  55.319   94  42  0 223  316    2   95
## 4708 NP_001349068.1 XP_021331293.1  53.846  260 120  0  58  317  145  404
## 4709 NP_001349068.1 XP_021331293.1  51.264  277 134  1  58  333   89  365
## 4710 NP_001349068.1 XP_021331293.1  53.101  258 121  0  58  315   61  318
## 4711 NP_001349068.1 XP_021331293.1  52.713  258 122  0  58  315    5  262
## 4712 NP_001349068.1 XP_021331293.1  47.039  304 158  2  33  333    6  309
## 4713 NP_001349068.1 XP_021331293.1  50.400  250 123  1  82  330    1  250
## 4714 NP_001349068.1 XP_021331293.1  51.046  239 117  0  58  296  173  411
## 4715 NP_001349068.1 XP_021331474.1  48.980  294 141  2  31  315   22  315
## 4716 NP_001349068.1 XP_021331474.1  50.775  258 127  0  58  315  114  371
## 4717 NP_001349068.1 XP_021331474.1  50.394  254 126  0  58  311  142  395
## 4718 NP_001349068.1 XP_021331474.1  52.500  200  95  0  58  257  198  397
## 4719 NP_001349068.1 XP_021331422.1  53.876  258 119  0  58  315  145  402
## 4720 NP_001349068.1 XP_021331422.1  53.053  262 123  0  58  319   89  350
## 4721 NP_001349068.1 XP_021331422.1  52.713  258 122  0  58  315  117  374
## 4722 NP_001349068.1 XP_021331422.1  53.150  254 119  0  58  311  173  426
## 4723 NP_001349068.1 XP_021331422.1  50.916  273 133  1  58  329   61  333
## 4724 NP_001349068.1 XP_021331422.1  53.101  258 121  0  58  315    5  262
## 4725 NP_001349068.1 XP_021331422.1  50.000  272 135  1  60  330   35  306
## 4726 NP_001349068.1 XP_021331422.1  51.709  234 113  0  82  315    1  234
## 4727 NP_001349068.1 XP_021331422.1  52.000  200  96  0  58  257  229  428
## 4728 NP_001349068.1 XP_021331422.1  50.510  196  96  1 139  333    2  197
## 4729 NP_001349068.1 XP_021328522.1  50.345  290 116  1  58  319  145  434
## 4730 NP_001349068.1 XP_021328522.1  53.383  266 124  0  50  315  193  458
## 4731 NP_001349068.1 XP_021328522.1  49.281  278 141  0  38  315   13  290
## 4732 NP_001349068.1 XP_021328522.1  51.737  259 125  0  58  316  117  375
## 4733 NP_001349068.1 XP_021328522.1  52.326  258 123  0  58  315   61  318
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## 4734 NP_001349068.1 XP_021328522.1  51.550  258 125  0  58  315    5  262
## 4735 NP_001349068.1 XP_021328522.1  52.564  234 111  0  82  315    1  234
## 4736 NP_001349068.1 XP_021328522.1  53.143  175  82  0  58  232  285  459
## 4737 NP_001349068.1 XP_021331014.1  53.506  271 126  0  60  330  223  493
## 4738 NP_001349068.1 XP_021331014.1  52.326  258 123  0  58  315  165  422
## 4739 NP_001349068.1 XP_021331014.1  52.326  258 123  0  58  315  137  394
## 4740 NP_001349068.1 XP_021331014.1  51.163  258 126  0  58  315  193  450
## 4741 NP_001349068.1 XP_021331014.1  51.938  258 124  0  58  315  109  366
## 4742 NP_001349068.1 XP_021331014.1  49.612  258 130  0  58  315   81  338
## 4743 NP_001349068.1 XP_021331014.1  45.973  298 159  2  19  315   14  310
## 4744 NP_001349068.1 XP_021331014.1  54.936  233 104  1  58  290  277  508
## 4745 NP_001349068.1 XP_021331014.1  46.970  198 105  0 119  316   58  255
## 4746 NP_001349068.1 XP_021331025.1  49.819  277 138  1  58  333   35  311
## 4747 NP_001349068.1 XP_021331025.1  49.438  267 135  0  49  315   54  320
## 4748 NP_001349068.1 XP_021331025.1  46.403  278 147  2  54  330    4  280
## 4749 NP_001349068.1 XP_021331025.1  49.794  243 119  1  58  297  119  361
## 4750 NP_001349068.1 XP_021331025.1  50.230  217 105  1  60  273  149  365
## 4751 NP_001349068.1 XP_017210610.1  52.555  274 129  1  58  330   58  331
## 4752 NP_001349068.1 XP_017210610.1  49.823  283 140  2  50  330   21  303
## 4753 NP_001349068.1 XP_017210610.1  50.787  254 125  0  58  311   86  339
## 4754 NP_001349068.1 XP_021328514.1  53.383  266 124  0  50  315  193  458
## 4755 NP_001349068.1 XP_021328514.1  49.281  278 141  0  38  315   13  290
## 4756 NP_001349068.1 XP_021328514.1  53.101  258 121  0  58  315  145  402
## 4757 NP_001349068.1 XP_021328514.1  52.326  258 123  0  58  315   61  318
## 4758 NP_001349068.1 XP_021328514.1  50.382  262 130  0  58  319  117  378
## 4759 NP_001349068.1 XP_021328514.1  51.550  258 125  0  58  315    5  262
## 4760 NP_001349068.1 XP_021328514.1  52.564  234 111  0  82  315    1  234
## 4761 NP_001349068.1 XP_021328514.1  51.429  175  85  0  58  232  285  459
## 4762 NP_001349068.1 XP_021326473.1  53.516  256 119  0  58  313   58  313
## 4763 NP_001349068.1 XP_021326473.1  50.181  277 137  1  58  333   86  362
## 4764 NP_001349068.1 XP_021326473.1  52.326  258 123  0  58  315  142  399
## 4765 NP_001349068.1 XP_021326473.1  53.543  254 118  0  60  313   32  285
## 4766 NP_001349068.1 XP_021326473.1  52.124  259 124  0  58  316  170  428
## 4767 NP_001349068.1 XP_021326473.1  53.125  256 120  0  58  313  114  369
## 4768 NP_001349068.1 XP_021326473.1  48.201  278 143  1  57  333    1  278
## 4769 NP_001349068.1 XP_021331434.1  53.053  262 123  0  50  311   14  275
## 4770 NP_001349068.1 XP_021331434.1  50.193  259 129  0  58  316   50  308
## 4771 NP_001349068.1 XP_021331434.1  51.793  251 121  0  65  315    1  251
## 4772 NP_001349068.1 XP_021331434.1  49.609  256 129  0  58  313   78  333
## 4773 NP_001349068.1 XP_021331434.1  53.304  227 106  0  93  319    1  227
## 4774 NP_001349068.1 XP_021330857.1  50.735  272 129  1  45  311   39  310
## 4775 NP_001349068.1 XP_021330857.1  49.434  265 132  2  50  313   21  284
## 4776 NP_001349068.1 XP_021330857.1  45.926  135  73  0  38  172  177  311
## 4777 NP_001349068.1 XP_021330857.1  51.327  113  54  1 203  315   35  146
## 4778 NP_001349068.1 XP_021328500.1  52.593  270 128  0  50  319  193  462
## 4779 NP_001349068.1 XP_021328500.1  54.054  259 119  0  58  316  145  403
## 4780 NP_001349068.1 XP_021328500.1  53.488  258 120  0  58  315  285  542
## 4781 NP_001349068.1 XP_021328500.1  49.281  278 141  0  38  315   13  290
## 4782 NP_001349068.1 XP_021328500.1  52.326  258 123  0  58  315   61  318
## 4783 NP_001349068.1 XP_021328500.1  52.672  262 124  0  58  319  257  518
## 4784 NP_001349068.1 XP_021328500.1  50.775  258 127  0  58  315  117  374
## 4785 NP_001349068.1 XP_021328500.1  51.550  258 125  0  58  315    5  262
## 4786 NP_001349068.1 XP_021328500.1  52.564  234 111  0  82  315    1  234
## 4787 NP_001349068.1 XP_021328500.1  53.143  175  82  0  58  232  369  543
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## 4788 NP_001349068.1 XP_021331203.1  51.264  277 134  1  58  333  117  393
## 4789 NP_001349068.1 XP_021331203.1  51.986  277 132  1  58  333   61  337
## 4790 NP_001349068.1 XP_021331203.1  49.819  277 138  1  58  333  145  421
## 4791 NP_001349068.1 XP_021331203.1  52.896  259 122  0  58  316  229  487
## 4792 NP_001349068.1 XP_021331203.1  52.326  258 123  0  58  315  201  458
## 4793 NP_001349068.1 XP_021331203.1  51.550  258 125  0  58  315   33  290
## 4794 NP_001349068.1 XP_021331203.1  53.125  256 120  0  58  313  173  428
## 4795 NP_001349068.1 XP_021331203.1  52.344  256 122  0  58  313    5  260
## 4796 NP_001349068.1 XP_021331203.1  52.174  253 120  1  82  333    1  253
## 4797 NP_001349068.1 XP_021327006.1  53.282  259 121  0  58  316  244  502
## 4798 NP_001349068.1 XP_021327006.1  49.458  277 139  1  58  333  216  492
## 4799 NP_001349068.1 XP_021327006.1  51.460  274 132  1  58  330  160  433
## 4800 NP_001349068.1 XP_021327006.1  50.388  258 128  0  58  315  132  389
## 4801 NP_001349068.1 XP_021327006.1  49.804  255 128  0  59  313   49  303
## 4802 NP_001349068.1 XP_021327006.1  45.693  267 145  0  49  315   95  361
## 4803 NP_001349068.1 XP_021327006.1  51.502  233 113  0  58  290  272  504
## 4804 NP_001349068.1 XP_021327006.1  50.655  229 113  0  87  315   49  277
## 4805 NP_001349068.1 XP_021327006.1  47.525  202 106  0 115  316   49  250
## 4806 NP_001349068.1 XP_021328499.1  52.593  270 128  0  50  319  193  462
## 4807 NP_001349068.1 XP_021328499.1  54.054  259 119  0  58  316  145  403
## 4808 NP_001349068.1 XP_021328499.1  49.281  278 141  0  38  315   13  290
## 4809 NP_001349068.1 XP_021328499.1  52.326  258 123  0  58  315   61  318
## 4810 NP_001349068.1 XP_021328499.1  50.775  258 127  0  58  315  117  374
## 4811 NP_001349068.1 XP_021328499.1  53.257  261 119  1  58  315  285  545
## 4812 NP_001349068.1 XP_021328499.1  52.075  265 124  1  58  319  257  521
## 4813 NP_001349068.1 XP_021328499.1  51.550  258 125  0  58  315    5  262
## 4814 NP_001349068.1 XP_021328499.1  52.564  234 111  0  82  315    1  234
## 4815 NP_001349068.1 XP_021328499.1  52.809  178  81  1  58  232  369  546
## 4816 NP_001349068.1 XP_021328528.1  52.593  270 128  0  50  319  221  490
## 4817 NP_001349068.1 XP_021328528.1  54.054  259 119  0  58  316  173  431
## 4818 NP_001349068.1 XP_021328528.1  49.281  278 141  0  38  315   41  318
## 4819 NP_001349068.1 XP_021328528.1  52.326  258 123  0  58  315    5  262
## 4820 NP_001349068.1 XP_021328528.1  52.326  258 123  0  58  315   89  346
## 4821 NP_001349068.1 XP_021328528.1  52.713  258 122  0  58  315  313  570
## 4822 NP_001349068.1 XP_021328528.1  50.775  258 127  0  58  315  145  402
## 4823 NP_001349068.1 XP_021328528.1  51.550  258 125  0  58  315   33  290
## 4824 NP_001349068.1 XP_021328528.1  50.763  262 129  0  58  319  285  546
## 4825 NP_001349068.1 XP_021328528.1  53.846  234 108  0  82  315    1  234
## 4826 NP_001349068.1 XP_021328528.1  52.000  175  84  0  58  232  397  571
## 4827 NP_001349068.1 XP_021331207.1  50.903  277 135  1  58  333  117  393
## 4828 NP_001349068.1 XP_021331207.1  51.986  277 132  1  58  333   61  337
## 4829 NP_001349068.1 XP_021331207.1  53.906  256 118  0  58  313  229  484
## 4830 NP_001349068.1 XP_021331207.1  49.819  277 138  1  58  333  145  421
## 4831 NP_001349068.1 XP_021331207.1  52.510  259 123  0  58  316  201  459
## 4832 NP_001349068.1 XP_021331207.1  51.938  258 124  0  58  315   33  290
## 4833 NP_001349068.1 XP_021331207.1  52.713  258 122  0  58  315  173  430
## 4834 NP_001349068.1 XP_021331207.1  51.550  258 125  0  58  315    5  262
## 4835 NP_001349068.1 XP_021331207.1  50.988  253 123  1  82  333    1  253
## 4836 NP_001349068.1 XP_021326715.1  53.937  254 117  0  58  311  104  357
## 4837 NP_001349068.1 XP_021326715.1  47.020  302 155  2  19  319   12  309
## 4838 NP_001349068.1 XP_021326715.1  51.504  266 129  0  50  315   68  333
## 4839 NP_001349068.1 XP_021326715.1  49.807  259 130  0  58  316  132  390
## 4840 NP_001349068.1 XP_021326715.1  49.609  256 129  0  58  313  160  415
## 4841 NP_001349068.1 XP_021328513.1  54.054  259 119  0  58  316  145  403
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## 4842 NP_001349068.1 XP_021328513.1  52.222  270 128  1  50  319  193  461
## 4843 NP_001349068.1 XP_021328513.1  49.281  278 141  0  38  315   13  290
## 4844 NP_001349068.1 XP_021328513.1  52.326  258 123  0  58  315   61  318
## 4845 NP_001349068.1 XP_021328513.1  50.775  258 127  0  58  315  117  374
## 4846 NP_001349068.1 XP_021328513.1  51.550  258 125  0  58  315    5  262
## 4847 NP_001349068.1 XP_021328513.1  52.564  234 111  0  82  315    1  234
## 4848 NP_001349068.1 XP_021328513.1  51.515  231 111  1  58  288  257  486
## 4849 NP_001349068.1 XP_021331206.1  50.542  277 136  1  58  333   89  365
## 4850 NP_001349068.1 XP_021331206.1  51.625  277 133  1  58  333   33  309
## 4851 NP_001349068.1 XP_021331206.1  55.078  256 115  0  58  313   61  316
## 4852 NP_001349068.1 XP_021331206.1  49.819  277 138  1  58  333  117  393
## 4853 NP_001349068.1 XP_021331206.1  52.326  258 123  0  58  315    5  262
## 4854 NP_001349068.1 XP_021331206.1  52.896  259 122  0  58  316  201  459
## 4855 NP_001349068.1 XP_021331206.1  52.326  258 123  0  58  315  173  430
## 4856 NP_001349068.1 XP_021331206.1  53.125  256 120  0  58  313  145  400
## 4857 NP_001349068.1 XP_021331206.1  54.741  232 105  0  82  313    1  232
## 4858 NP_001349068.1 XP_021331206.1  44.681   94  48  2 251  340    2   95
## 4859 NP_001349068.1 XP_021331202.1  50.903  277 135  1  58  333  117  393
## 4860 NP_001349068.1 XP_021331202.1  51.986  277 132  1  58  333   61  337
## 4861 NP_001349068.1 XP_021331202.1  49.819  277 138  1  58  333  145  421
## 4862 NP_001349068.1 XP_021331202.1  52.326  258 123  0  58  315   33  290
## 4863 NP_001349068.1 XP_021331202.1  52.896  259 122  0  58  316  229  487
## 4864 NP_001349068.1 XP_021331202.1  53.906  256 118  0  58  313   89  344
## 4865 NP_001349068.1 XP_021331202.1  52.326  258 123  0  58  315  201  458
## 4866 NP_001349068.1 XP_021331202.1  52.734  256 121  0  58  313    5  260
## 4867 NP_001349068.1 XP_021331202.1  53.125  256 120  0  58  313  173  428
## 4868 NP_001349068.1 XP_021331202.1  51.383  253 122  1  82  333    1  253
## 4869 NP_001349068.1 XP_021331375.1  54.264  258 118  0  58  315   89  346
## 4870 NP_001349068.1 XP_021331375.1  53.876  258 119  0  58  315  145  402
## 4871 NP_001349068.1 XP_021331375.1  54.264  258 118  0  58  315  229  486
## 4872 NP_001349068.1 XP_021331375.1  49.640  278 140  0  38  315   13  290
## 4873 NP_001349068.1 XP_021331375.1  54.264  258 118  0  58  315  173  430
## 4874 NP_001349068.1 XP_021331375.1  53.101  258 121  0  58  315  257  514
## 4875 NP_001349068.1 XP_021331375.1  53.571  252 117  0  58  309  285  536
## 4876 NP_001349068.1 XP_021331375.1  51.163  258 126  0  58  315    5  262
## 4877 NP_001349068.1 XP_021331375.1  52.564  234 111  0  82  315    1  234
## 4878 NP_001349068.1 XP_021330828.1  55.039  258 116  0  58  315  256  513
## 4879 NP_001349068.1 XP_021330828.1  49.320  294 148  1  38  330  124  417
## 4880 NP_001349068.1 XP_021330828.1  53.488  258 120  0  58  315  172  429
## 4881 NP_001349068.1 XP_021330828.1  55.039  258 116  0  58  315  396  653
## 4882 NP_001349068.1 XP_021330828.1  52.713  258 122  0  58  315   88  345
## 4883 NP_001349068.1 XP_021330828.1  52.713  258 122  0  58  315  200  457
## 4884 NP_001349068.1 XP_021330828.1  53.101  258 121  0  58  315  368  625
## 4885 NP_001349068.1 XP_021330828.1  52.344  256 122  0  60  315  426  681
## 4886 NP_001349068.1 XP_021330828.1  52.713  258 122  0  58  315  312  569
## 4887 NP_001349068.1 XP_021330828.1  47.712  306 154  3  12  315   16  317
## 4888 NP_001349068.1 XP_021330828.1  52.326  258 123  0  58  315  116  373
## 4889 NP_001349068.1 XP_021330828.1  50.730  274 134  1  58  330  340  613
## 4890 NP_001349068.1 XP_021330828.1  51.163  258 126  0  58  315  228  485
## 4891 NP_001349068.1 XP_021330828.1  50.385  260 129  0  58  317  452  711
## 4892 NP_001349068.1 NP_001103332.1  52.490  261 123  1  50  309   41  301
## 4893 NP_001349068.1 NP_001103332.1  47.737  243 123  1  73  315   41  279
## 4894 NP_001349068.1 XP_017211180.1  50.181  277 137  1  58  333  145  421
## 4895 NP_001349068.1 XP_017211180.1  50.566  265 131  0  49  313  108  372
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## 4896 NP_001349068.1 XP_017211180.1  51.562  256 124  0  58  313  173  428
## 4897 NP_001349068.1 XP_017211180.1  50.187  267 132  1  50  315   52  318
## 4898 NP_001349068.1 XP_017211180.1  50.566  265 131  0  49  313   80  344
## 4899 NP_001349068.1 XP_017211180.1  50.644  233 115  0  58  290  201  433
## 4900 NP_001349068.1 XP_017211059.1  48.675  302 150  2  19  319   25  322
## 4901 NP_001349068.1 XP_017211059.1  52.632  266 126  0  50  315   81  346
## 4902 NP_001349068.1 XP_017211059.1  51.737  259 125  0  58  316  145  403
## 4903 NP_001349068.1 XP_017211059.1  51.562  256 124  0  58  313  117  372
## 4904 NP_001349068.1 XP_021330543.1  47.910  311 155  1   6  316  315  618
## 4905 NP_001349068.1 XP_021330543.1  53.101  258 121  0  58  315  248  505
## 4906 NP_001349068.1 XP_021330543.1  51.527  262 125  1  56  315  104  365
## 4907 NP_001349068.1 XP_021330543.1  50.775  258 127  0  58  315  220  477
## 4908 NP_001349068.1 XP_021330543.1  50.193  259 129  0  58  316  416  674
## 4909 NP_001349068.1 XP_021330543.1  48.689  267 137  0  49  315  295  561
## 4910 NP_001349068.1 XP_021330543.1  47.191  267 141  0  49  315  183  449
## 4911 NP_001349068.1 XP_021330543.1  50.000  258 129  0  59  316  473  730
## 4912 NP_001349068.1 XP_021330543.1  50.781  256 126  0  58  313  500  755
## 4913 NP_001349068.1 XP_021330543.1  46.718  259 138  0  58  316  444  702
## 4914 NP_001349068.1 XP_021330543.1  47.212  269 138  3  50  315   42  309
## 4915 NP_001349068.1 XP_021330543.1  47.490  259 133  2  60  316   81  338
## 4916 NP_001349068.1 XP_021330543.1  42.268   97  56  0  49  145  687  783
## 4917 NP_001349068.1 XP_021331208.1  50.542  277 136  1  58  333   89  365
## 4918 NP_001349068.1 XP_021331208.1  50.181  277 137  1  58  333  117  393
## 4919 NP_001349068.1 XP_021331208.1  53.906  256 118  0  58  313  201  456
## 4920 NP_001349068.1 XP_021331208.1  54.264  258 118  0  58  315   61  318
## 4921 NP_001349068.1 XP_021331208.1  51.264  277 134  1  58  333   33  309
## 4922 NP_001349068.1 XP_021331208.1  52.510  259 123  0  58  316  173  431
## 4923 NP_001349068.1 XP_021331208.1  51.938  258 124  0  58  315    5  262
## 4924 NP_001349068.1 XP_021331208.1  52.713  258 122  0  58  315  145  402
## 4925 NP_001349068.1 XP_021331208.1  54.274  234 107  0  82  315    1  234
## 4926 NP_001349068.1 XP_021331208.1  44.681   94  48  2 251  340    2   95
## 4927 NP_001349068.1 XP_021331209.1  50.545  275 135  1  60  333   35  309
## 4928 NP_001349068.1 XP_021331209.1  49.819  277 138  1  58  333   61  337
## 4929 NP_001349068.1 XP_021331209.1  52.896  259 122  0  58  316  145  403
## 4930 NP_001349068.1 XP_021331209.1  52.326  258 123  0  58  315  117  374
## 4931 NP_001349068.1 XP_021331209.1  53.125  256 120  0  58  313   89  344
## 4932 NP_001349068.1 XP_021331209.1  52.344  256 122  0  58  313    5  260
## 4933 NP_001349068.1 XP_021331209.1  50.988  253 123  1  82  333    1  253
## 4934 NP_001349068.1 XP_017211184.1  51.311  267 130  0  49  315   24  290
## 4935 NP_001349068.1 XP_017211184.1  49.097  277 140  1  58  333    5  281
## 4936 NP_001349068.1 XP_017211184.1  51.282  234 114  0  82  315    1  234
## 4937 NP_001349068.1 XP_017211184.1  51.502  233 113  0  58  290   61  293
## 4938 NP_001349068.1 XP_021331231.1  51.471  272 132  0  44  315   79  350
## 4939 NP_001349068.1 XP_021331231.1  52.713  258 122  0  58  315  149  406
## 4940 NP_001349068.1 XP_021331231.1  53.876  258 119  0  58  315  121  378
## 4941 NP_001349068.1 XP_021331231.1  53.053  262 119  1  58  315   61  322
## 4942 NP_001349068.1 XP_021331231.1  51.908  262 122  1  58  315    5  266
## 4943 NP_001349068.1 XP_021331231.1  52.941  238 108  1  82  315    1  238
## 4944 NP_001349068.1 XP_021331231.1  53.648  233 108  0  58  290  177  409
## 4945 NP_001349068.1 XP_021331231.1  51.064  141  64  2 195  330    2  142
## 4946 NP_001349068.1 XP_021331232.1  53.488  258 120  0  58  315   89  346
## 4947 NP_001349068.1 XP_021331232.1  52.713  258 122  0  58  315  145  402
## 4948 NP_001349068.1 XP_021331232.1  53.876  258 119  0  58  315  117  374
## 4949 NP_001349068.1 XP_021331232.1  53.488  258 120  0  58  315    5  262
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## 4950 NP_001349068.1 XP_021331232.1  51.938  258 124  0  58  315   33  290
## 4951 NP_001349068.1 XP_021331232.1  53.488  258 120  0  58  315   61  318
## 4952 NP_001349068.1 XP_021331232.1  54.274  234 107  0  82  315    1  234
## 4953 NP_001349068.1 XP_021331232.1  53.648  233 108  0  58  290  173  405
## 4954 NP_001349068.1 XP_021331394.1  54.688  256 116  0  58  313   23  278
## 4955 NP_001349068.1 XP_021331394.1  55.422  249 111  0  65  313    2  250
## 4956 NP_001349068.1 XP_021331394.1  49.802  253 127  0  58  310   51  303
## 4957 NP_001349068.1 XP_021331394.1  50.196  255 126  1  60  314   81  334
## 4958 NP_001349068.1 XP_021331394.1  46.444  239 127  1  46  284   95  332
## 4959 NP_001349068.1 XP_021331394.1  56.098   82  36  0 232  313    1   82
## 4960 NP_001349068.1 XP_021330825.1  53.488  258 120  0  58  315  313  570
## 4961 NP_001349068.1 XP_021330825.1  53.543  254 118  0  58  311  341  594
## 4962 NP_001349068.1 XP_021330825.1  49.648  284 142  1  37  319  235  518
## 4963 NP_001349068.1 XP_021330825.1  52.713  258 122  0  58  315  285  542
## 4964 NP_001349068.1 XP_021330825.1  52.500  200  95  0  58  257  397  596
## 4965 NP_001349068.1 XP_021330825.1  41.958  286 138  3  58  315    5  290
## 4966 NP_001349068.1 XP_021330825.1  50.000  208 104  0 111  318    2  209
## 4967 NP_001349068.1 XP_021330825.1  47.236  199 105  0  82  280    1  199
## 4968 NP_001349068.1 XP_021330825.1  52.318  151  72  0 166  316    1  151
## 4969 NP_001349068.1 XP_021331440.1  46.894  322 162  3  21  333  100  421
## 4970 NP_001349068.1 XP_021331440.1  52.713  258 122  0  58  315  173  430
## 4971 NP_001349068.1 XP_021331440.1  52.326  258 123  0  58  315    5  262
## 4972 NP_001349068.1 XP_021331440.1  51.527  262 127  0  58  319   89  350
## 4973 NP_001349068.1 XP_021331440.1  51.351  259 126  0  58  316   33  291
## 4974 NP_001349068.1 XP_021331440.1  49.815  271 136  0  49  319   52  322
## 4975 NP_001349068.1 XP_021331440.1  52.137  234 112  0  82  315    1  234
## 4976 NP_001349068.1 XP_021331440.1  49.490  196  95  1  46  237  245  440
## 4977 NP_001349068.1 XP_021331233.1  53.488  258 120  0  58  315  117  374
## 4978 NP_001349068.1 XP_021331233.1  52.713  258 122  0  58  315  173  430
## 4979 NP_001349068.1 XP_021331233.1  53.876  258 119  0  58  315  145  402
## 4980 NP_001349068.1 XP_021331233.1  52.713  258 122  0  58  315    5  262
## 4981 NP_001349068.1 XP_021331233.1  53.488  258 120  0  58  315   89  346
## 4982 NP_001349068.1 XP_021331233.1  51.938  258 124  0  58  315   61  318
## 4983 NP_001349068.1 XP_021331233.1  51.938  258 124  0  58  315   33  290
## 4984 NP_001349068.1 XP_021331233.1  53.419  234 109  0  82  315    1  234
## 4985 NP_001349068.1 XP_021331233.1  53.648  233 108  0  58  290  201  433
## 4986 NP_001349068.1 XP_021330830.1  53.725  255 118  0  58  312   48  302
## 4987 NP_001349068.1 XP_021330830.1  51.471  272 129  2  43  313    6  275
## 4988 NP_001349068.1 XP_021330830.1  48.583  247 123  1  69  315    7  249
## 4989 NP_001349068.1 XP_021330830.1  50.820  183  90  0  46  228  120  302
## 4990 NP_001349068.1 XP_021329621.1  52.734  256 121  0  58  313  126  381
## 4991 NP_001349068.1 XP_021329621.1  50.388  258 128  0  58  315   98  355
## 4992 NP_001349068.1 XP_021329621.1  46.403  278 148  1  39  315   50  327
## 4993 NP_001349068.1 XP_021329620.1  52.734  256 121  0  58  313  126  381
## 4994 NP_001349068.1 XP_021329620.1  50.388  258 128  0  58  315   98  355
## 4995 NP_001349068.1 XP_021329620.1  46.403  278 148  1  39  315   50  327
## 4996 NP_001349068.1 XP_021329619.1  52.734  256 121  0  58  313  126  381
## 4997 NP_001349068.1 XP_021329619.1  50.388  258 128  0  58  315   98  355
## 4998 NP_001349068.1 XP_021329619.1  46.403  278 148  1  39  315   50  327
## 4999 NP_001349068.1 XP_021329618.1  52.734  256 121  0  58  313  126  381
## 5000 NP_001349068.1 XP_021329618.1  50.388  258 128  0  58  315   98  355
## 5001 NP_001349068.1 XP_021329618.1  46.403  278 148  1  39  315   50  327
## 5002 NP_001349068.1 XP_021329617.1  52.734  256 121  0  58  313  126  381
## 5003 NP_001349068.1 XP_021329617.1  50.388  258 128  0  58  315   98  355
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## 5004 NP_001349068.1 XP_021329617.1  46.403  278 148  1  39  315   50  327
## 5005 NP_001349068.1 XP_017210929.2  52.713  258 122  0  58  315   10  267
## 5006 NP_001349068.1 XP_017210929.2  52.344  256 122  0  58  313   38  293
## 5007 NP_001349068.1 XP_017210929.2  49.012  253 129  0  46  298   54  306
## 5008 NP_001349068.1 XP_017210929.2  52.301  239 114  0  77  315    1  239
## 5009 NP_001349068.1 XP_017210929.2  48.756  201 102  1 134  333    2  202
## 5010 NP_001349068.1 XP_021331421.1  50.000  276 137  1  56  330   59  334
## 5011 NP_001349068.1 XP_021331421.1  51.751  257 124  0  56  312    3  259
## 5012 NP_001349068.1 XP_021331421.1  51.154  260 127  0  56  315   87  346
## 5013 NP_001349068.1 XP_021331421.1  51.538  260 126  0  56  315  143  402
## 5014 NP_001349068.1 XP_021331421.1  51.154  260 127  0  56  315  171  430
## 5015 NP_001349068.1 XP_021331421.1  50.769  260 128  0  56  315  115  374
## 5016 NP_001349068.1 XP_021331421.1  46.667  285 151  1  50  333   25  309
## 5017 NP_001349068.1 XP_021331421.1  52.137  234 112  0  82  315    1  234
## 5018 NP_001349068.1 XP_021331421.1  52.340  235 112  0  56  290  199  433
## 5019 NP_001349068.1 XP_021331421.1  49.490  196  98  1 139  333    2  197
## 5020 NP_001349068.1 XP_021326992.1  52.326  258 123  0  58  315  126  383
## 5021 NP_001349068.1 XP_021326992.1  51.163  258 126  0  58  315   98  355
## 5022 NP_001349068.1 XP_021326992.1  46.043  278 149  1  39  315   50  327
## 5023 NP_001349068.1 XP_021326991.1  52.326  258 123  0  58  315  126  383
## 5024 NP_001349068.1 XP_021326991.1  51.163  258 126  0  58  315   98  355
## 5025 NP_001349068.1 XP_021326991.1  46.043  278 149  1  39  315   50  327
## 5026 NP_001349068.1 XP_021326990.1  52.326  258 123  0  58  315  126  383
## 5027 NP_001349068.1 XP_021326990.1  51.163  258 126  0  58  315   98  355
## 5028 NP_001349068.1 XP_021326990.1  46.043  278 149  1  39  315   50  327
## 5029 NP_001349068.1 XP_021326989.1  52.326  258 123  0  58  315  126  383
## 5030 NP_001349068.1 XP_021326989.1  51.163  258 126  0  58  315   98  355
## 5031 NP_001349068.1 XP_021326989.1  46.043  278 149  1  39  315   50  327
## 5032 NP_001349068.1 XP_021326988.1  52.326  258 123  0  58  315  126  383
## 5033 NP_001349068.1 XP_021326988.1  51.163  258 126  0  58  315   98  355
## 5034 NP_001349068.1 XP_021326988.1  46.043  278 149  1  39  315   50  327
## 5035 NP_001349068.1 XP_021326987.1  52.326  258 123  0  58  315  126  383
## 5036 NP_001349068.1 XP_021326987.1  51.163  258 126  0  58  315   98  355
## 5037 NP_001349068.1 XP_021326987.1  46.043  278 149  1  39  315   50  327
## 5038 NP_001349068.1 XP_021326986.1  52.326  258 123  0  58  315  126  383
## 5039 NP_001349068.1 XP_021326986.1  51.163  258 126  0  58  315   98  355
## 5040 NP_001349068.1 XP_021326986.1  46.043  278 149  1  39  315   50  327
## 5041 NP_001349068.1 XP_021330529.1  52.326  258 123  0  58  315  126  383
## 5042 NP_001349068.1 XP_021330529.1  51.163  258 126  0  58  315   98  355
## 5043 NP_001349068.1 XP_021330529.1  46.043  278 149  1  39  315   50  327
## 5044 NP_001349068.1 XP_021330528.1  52.326  258 123  0  58  315  126  383
## 5045 NP_001349068.1 XP_021330528.1  51.163  258 126  0  58  315   98  355
## 5046 NP_001349068.1 XP_021330528.1  46.043  278 149  1  39  315   50  327
## 5047 NP_001349068.1 XP_021330527.1  52.326  258 123  0  58  315  126  383
## 5048 NP_001349068.1 XP_021330527.1  51.163  258 126  0  58  315   98  355
## 5049 NP_001349068.1 XP_021330527.1  46.043  278 149  1  39  315   50  327
## 5050 NP_001349068.1 XP_021330526.1  52.326  258 123  0  58  315  126  383
## 5051 NP_001349068.1 XP_021330526.1  51.163  258 126  0  58  315   98  355
## 5052 NP_001349068.1 XP_021330526.1  46.043  278 149  1  39  315   50  327
## 5053 NP_001349068.1 XP_021330525.1  52.326  258 123  0  58  315  126  383
## 5054 NP_001349068.1 XP_021330525.1  51.163  258 126  0  58  315   98  355
## 5055 NP_001349068.1 XP_021330525.1  46.043  278 149  1  39  315   50  327
## 5056 NP_001349068.1 XP_021330524.1  52.326  258 123  0  58  315  126  383
## 5057 NP_001349068.1 XP_021330524.1  51.163  258 126  0  58  315   98  355
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## 5058 NP_001349068.1 XP_021330524.1  46.043  278 149  1  39  315   50  327
## 5059 NP_001349068.1 XP_021330523.1  52.326  258 123  0  58  315  126  383
## 5060 NP_001349068.1 XP_021330523.1  51.163  258 126  0  58  315   98  355
## 5061 NP_001349068.1 XP_021330523.1  46.043  278 149  1  39  315   50  327
## 5062 NP_001349068.1 XP_021326998.1  52.326  258 123  0  58  315  107  364
## 5063 NP_001349068.1 XP_021326998.1  51.163  258 126  0  58  315   79  336
## 5064 NP_001349068.1 XP_021326998.1  46.043  278 149  1  39  315   31  308
## 5065 NP_001349068.1 XP_021326997.1  52.326  258 123  0  58  315  107  364
## 5066 NP_001349068.1 XP_021326997.1  51.163  258 126  0  58  315   79  336
## 5067 NP_001349068.1 XP_021326997.1  46.043  278 149  1  39  315   31  308
## 5068 NP_001349068.1 XP_021326996.1  52.326  258 123  0  58  315  107  364
## 5069 NP_001349068.1 XP_021326996.1  51.163  258 126  0  58  315   79  336
## 5070 NP_001349068.1 XP_021326996.1  46.043  278 149  1  39  315   31  308
## 5071 NP_001349068.1 XP_021326995.1  52.326  258 123  0  58  315  107  364
## 5072 NP_001349068.1 XP_021326995.1  51.163  258 126  0  58  315   79  336
## 5073 NP_001349068.1 XP_021326995.1  46.043  278 149  1  39  315   31  308
## 5074 NP_001349068.1 XP_021326994.1  52.326  258 123  0  58  315  107  364
## 5075 NP_001349068.1 XP_021326994.1  51.163  258 126  0  58  315   79  336
## 5076 NP_001349068.1 XP_021326994.1  46.043  278 149  1  39  315   31  308
## 5077 NP_001349068.1 XP_021326993.1  52.326  258 123  0  58  315  107  364
## 5078 NP_001349068.1 XP_021326993.1  51.163  258 126  0  58  315   79  336
## 5079 NP_001349068.1 XP_021326993.1  46.043  278 149  1  39  315   31  308
## 5080 NP_001349068.1 XP_021330536.1  52.326  258 123  0  58  315  107  364
## 5081 NP_001349068.1 XP_021330536.1  51.163  258 126  0  58  315   79  336
## 5082 NP_001349068.1 XP_021330536.1  46.043  278 149  1  39  315   31  308
## 5083 NP_001349068.1 XP_021330534.1  52.326  258 123  0  58  315  107  364
## 5084 NP_001349068.1 XP_021330534.1  51.163  258 126  0  58  315   79  336
## 5085 NP_001349068.1 XP_021330534.1  46.043  278 149  1  39  315   31  308
## 5086 NP_001349068.1 XP_021330533.1  52.326  258 123  0  58  315  107  364
## 5087 NP_001349068.1 XP_021330533.1  51.163  258 126  0  58  315   79  336
## 5088 NP_001349068.1 XP_021330533.1  46.043  278 149  1  39  315   31  308
## 5089 NP_001349068.1 XP_021330532.1  52.326  258 123  0  58  315  107  364
## 5090 NP_001349068.1 XP_021330532.1  51.163  258 126  0  58  315   79  336
## 5091 NP_001349068.1 XP_021330532.1  46.043  278 149  1  39  315   31  308
## 5092 NP_001349068.1 XP_021330531.1  52.326  258 123  0  58  315  107  364
## 5093 NP_001349068.1 XP_021330531.1  51.163  258 126  0  58  315   79  336
## 5094 NP_001349068.1 XP_021330531.1  46.043  278 149  1  39  315   31  308
## 5095 NP_001349068.1 XP_021330530.1  52.326  258 123  0  58  315  107  364
## 5096 NP_001349068.1 XP_021330530.1  51.163  258 126  0  58  315   79  336
## 5097 NP_001349068.1 XP_021330530.1  46.043  278 149  1  39  315   31  308
## 5098 NP_001349068.1 XP_021331018.1  52.692  260 123  0  58  317  167  426
## 5099 NP_001349068.1 XP_021331018.1  51.639  244 118  0  76  319  157  400
## 5100 NP_001349068.1 XP_021331018.1  51.163  215 105  0  99  313  152  366
## 5101 NP_001349068.1 XP_021331018.1  47.664  214 105  2 127  333  146  359
## 5102 NP_001349068.1 XP_021329616.1  52.734  256 121  0  58  313  151  406
## 5103 NP_001349068.1 XP_021329616.1  50.781  256 126  0  58  313  123  378
## 5104 NP_001349068.1 XP_021329616.1  46.739  276 146  1  39  313   75  350
## 5105 NP_001349068.1 XP_021331217.1  52.734  256 121  0  60  315  245  500
## 5106 NP_001349068.1 XP_021331217.1  53.906  256 118  0  60  315  273  528
## 5107 NP_001349068.1 XP_021331217.1  52.326  258 123  0  56  313  325  582
## 5108 NP_001349068.1 XP_021331217.1  50.958  261 128  0  56  316  297  557
## 5109 NP_001349068.1 XP_021331217.1  47.670  279 145  1  56  333  213  491
## 5110 NP_001349068.1 XP_021331217.1  47.312  279 146  1  56  333  157  435
## 5111 NP_001349068.1 XP_021331217.1  47.308  260 137  0  56  315  129  388
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## 5112 NP_001349068.1 XP_021331217.1  47.308  260 137  0  56  315  101  360
## 5113 NP_001349068.1 XP_021331217.1  46.245  253 136  0  63  315   52  304
## 5114 NP_001349068.1 XP_021331217.1  41.063  207 114  2 106  312   19  217
## 5115 NP_001349068.1 XP_021330854.1  52.326  258 123  0  58  315   70  327
## 5116 NP_001349068.1 XP_021330854.1  48.905  274 139  1  58  330   42  315
## 5117 NP_001349068.1 XP_021330854.1  54.043  235 108  0  81  315    9  243
## 5118 NP_001349068.1 XP_021330854.1  48.450  258 133  0  58  315   14  271
## 5119 NP_001349068.1 XP_021330854.1  52.577  194  92  0  58  251  182  375
## 5120 NP_001349068.1 XP_021330854.1  44.828   58  31  1 277  333    9   66
## 5121 NP_001349068.1 XP_017209855.2  53.516  256 119  0  58  313  301  556
## 5122 NP_001349068.1 XP_017209855.2  50.181  277 137  1  58  333  329  605
## 5123 NP_001349068.1 XP_017209855.2  53.516  256 119  0  58  313  273  528
## 5124 NP_001349068.1 XP_017209855.2  52.326  258 123  0  58  315  385  642
## 5125 NP_001349068.1 XP_017209855.2  49.819  277 138  1  58  333  245  521
## 5126 NP_001349068.1 XP_017209855.2  52.124  259 124  0  58  316  413  671
## 5127 NP_001349068.1 XP_017209855.2  53.125  256 120  0  58  313  357  612
## 5128 NP_001349068.1 XP_017209855.2  50.781  256 126  0  58  313  189  444
## 5129 NP_001349068.1 XP_017209855.2  46.570  277 147  1  58  333  161  437
## 5130 NP_001349068.1 XP_017209855.2  46.209  277 148  1  58  333  133  409
## 5131 NP_001349068.1 XP_017209855.2  44.333  300 138  2  63  333   82  381
## 5132 NP_001349068.1 XP_017209855.2  44.643  168  93  0 146  313   81  248
## 5133 NP_001349068.1 XP_021331342.1  53.462  260 121  0  56  315  171  430
## 5134 NP_001349068.1 XP_021331342.1  53.077  260 122  0  56  315   31  290
## 5135 NP_001349068.1 XP_021331342.1  50.000  260 130  0  56  315  143  402
## 5136 NP_001349068.1 XP_021331342.1  50.385  260 129  0  56  315   59  318
## 5137 NP_001349068.1 XP_021331342.1  50.385  260 129  0  56  315    3  262
## 5138 NP_001349068.1 XP_021331342.1  49.231  260 132  0  56  315  115  374
## 5139 NP_001349068.1 XP_021331342.1  49.231  260 132  0  56  315   87  346
## 5140 NP_001349068.1 XP_021331342.1  50.196  255 126  1  56  309  227  481
## 5141 NP_001349068.1 XP_021331342.1  52.564  234 111  0  82  315    1  234
## 5142 NP_001349068.1 XP_021331342.1  44.681   94  48  2 251  340    2   95
## 5143 NP_001349068.1 XP_021331204.1  53.906  256 118  0  58  313  257  512
## 5144 NP_001349068.1 XP_021331204.1  50.545  275 135  1  60  333  147  421
## 5145 NP_001349068.1 XP_021331204.1  49.819  277 138  1  58  333  173  449
## 5146 NP_001349068.1 XP_021331204.1  52.510  259 123  0  58  316  229  487
## 5147 NP_001349068.1 XP_021331204.1  51.938  258 124  0  58  315   61  318
## 5148 NP_001349068.1 XP_021331204.1  53.125  256 120  0  58  313  201  456
## 5149 NP_001349068.1 XP_021331204.1  52.734  256 121  0  58  313  117  372
## 5150 NP_001349068.1 XP_021331204.1  51.953  256 123  0  58  313   33  288
## 5151 NP_001349068.1 XP_021331204.1  48.375  277 142  1  58  333    5  281
## 5152 NP_001349068.1 XP_021331204.1  50.988  253 123  1  82  333    1  253
## 5153 NP_001349068.1 XP_021331127.1  53.257  261 122  0  58  318  145  405
## 5154 NP_001349068.1 XP_021331127.1  54.264  258 118  0  58  315    5  262
## 5155 NP_001349068.1 XP_021331127.1  51.163  258 126  0  58  315  201  458
## 5156 NP_001349068.1 XP_021331127.1  51.953  256 123  0  60  315  231  486
## 5157 NP_001349068.1 XP_021331127.1  53.488  258 120  0  58  315   89  346
## 5158 NP_001349068.1 XP_021331127.1  51.163  258 126  0  58  315   61  318
## 5159 NP_001349068.1 XP_021331127.1  50.775  258 127  0  58  315  313  570
## 5160 NP_001349068.1 XP_021331127.1  49.225  258 131  0  58  315  285  542
## 5161 NP_001349068.1 XP_021331127.1  51.709  234 113  0  58  291  341  574
## 5162 NP_001349068.1 XP_021331127.1  52.564  234 111  0  82  315    1  234
## 5163 NP_001349068.1 XP_021331127.1  60.526   38  15  0 279  316    2   39
## 5164 NP_001349068.1 XP_021331419.1  52.190  274 130  1  58  330  129  402
## 5165 NP_001349068.1 XP_021331419.1  53.516  256 119  0  58  313  101  356
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## 5166 NP_001349068.1 XP_021331419.1  53.125  256 120  0  58  313   73  328
## 5167 NP_001349068.1 XP_021331419.1  51.648  273 131  1  42  313   28  300
## 5168 NP_001349068.1 XP_021331419.1  50.781  256 126  0  58  313  157  412
## 5169 NP_001349068.1 XP_021331419.1  50.617  243 120  0  58  300  185  427
## 5170 NP_001349068.1 XP_021331264.1  51.737  259 125  0  58  316   40  298
## 5171 NP_001349068.1 XP_021331264.1  51.562  256 124  0  58  313   12  267
## 5172 NP_001349068.1 XP_021331264.1  52.917  240 113  0  76  315    2  241
## 5173 NP_001349068.1 XP_021331264.1  53.704  216 100  0 104  319    2  217
## 5174 NP_001349068.1 XP_021331164.1  54.264  258 118  0  58  315  117  374
## 5175 NP_001349068.1 XP_021331164.1  53.101  258 121  0  58  315  173  430
## 5176 NP_001349068.1 XP_021331164.1  53.516  256 119  0  60  315   91  346
## 5177 NP_001349068.1 XP_021331164.1  51.145  262 128  0  58  319   33  294
## 5178 NP_001349068.1 XP_021331164.1  51.550  258 125  0  58  315  397  654
## 5179 NP_001349068.1 XP_021331164.1  53.101  258 121  0  58  315  677  934
## 5180 NP_001349068.1 XP_021331164.1  51.163  258 126  0  58  315  145  402
## 5181 NP_001349068.1 XP_021331164.1  49.635  274 137  1  58  330  257  530
## 5182 NP_001349068.1 XP_021331164.1  50.554  271 133  1  60  329    7  277
## 5183 NP_001349068.1 XP_021331164.1  51.550  258 125  0  58  315  201  458
## 5184 NP_001349068.1 XP_021331164.1  50.542  277 136  1  58  333  369  645
## 5185 NP_001349068.1 XP_021331164.1  51.938  258 124  0  58  315  481  738
## 5186 NP_001349068.1 XP_021331164.1  51.938  258 124  0  58  315  509  766
## 5187 NP_001349068.1 XP_021331164.1  50.000  274 136  1  58  330  453  726
## 5188 NP_001349068.1 XP_021331164.1  49.630  270 136  0  46  315  301  570
## 5189 NP_001349068.1 XP_021331164.1  51.163  258 126  0  58  315  593  850
## 5190 NP_001349068.1 XP_021331164.1  52.344  256 122  0  60  315   63  318
## 5191 NP_001349068.1 XP_021331164.1  49.635  274 137  1  58  330  621  894
## 5192 NP_001349068.1 XP_021331164.1  51.550  258 125  0  58  315  649  906
## 5193 NP_001349068.1 XP_021331164.1  50.388  258 128  0  58  315  341  598
## 5194 NP_001349068.1 XP_021331164.1  50.388  258 128  0  58  315  565  822
## 5195 NP_001349068.1 XP_021331164.1  50.000  258 129  0  58  315  229  486
## 5196 NP_001349068.1 XP_021331164.1  49.612  258 130  0  58  315  425  682
## 5197 NP_001349068.1 XP_021331164.1  49.219  256 130  0  58  313  537  792
## 5198 NP_001349068.1 XP_021331164.1  51.200  250 121  1  82  330    1  250
## 5199 NP_001349068.1 XP_021331164.1  51.931  233 112  0  58  290  705  937
## 5200 NP_001349068.1 XP_017211134.1  47.157  299 153  2  19  316   25  319
## 5201 NP_001349068.1 XP_017211134.1  47.257  237 125  0  49  285  136  372
## 5202 NP_001349068.1 XP_017211134.1  51.282  117  57  0 203  319   66  182
## 5203 NP_001349068.1 XP_009298896.2  48.148  297 152  1  19  315   25  319
## 5204 NP_001349068.1 XP_009298896.2  51.737  259 125  0  58  316  118  376
## 5205 NP_001349068.1 XP_009298896.2  51.562  256 124  0  58  313   90  345
## 5206 NP_001349068.1 XP_009298896.2  53.361  238 111  0  82  319   58  295
## 5207 NP_001349068.1 XP_003198540.5  55.426  258 115  0  58  315  394  651
## 5208 NP_001349068.1 XP_003198540.5  55.426  258 115  0  58  315  562  819
## 5209 NP_001349068.1 XP_003198540.5  53.876  258 119  0  58  315  310  567
## 5210 NP_001349068.1 XP_003198540.5  53.488  258 120  0  58  315  338  595
## 5211 NP_001349068.1 XP_003198540.5  48.639  294 150  1  38  330  262  555
## 5212 NP_001349068.1 XP_003198540.5  54.264  258 118  0  58  315  450  707
## 5213 NP_001349068.1 XP_003198540.5  50.000  280 134  1  42  315  204  483
## 5214 NP_001349068.1 XP_003198540.5  53.488  258 120  0  58  315  534  791
## 5215 NP_001349068.1 XP_003198540.5  52.555  274 129  1  58  330  506  779
## 5216 NP_001349068.1 XP_003198540.5  52.326  258 123  0  58  315  590  847
## 5217 NP_001349068.1 XP_003198540.5  52.326  258 123  0  58  315  478  735
## 5218 NP_001349068.1 XP_003198540.5  52.672  262 120  1  58  315  194  455
## 5219 NP_001349068.1 XP_003198540.5  51.550  258 125  0  58  315  254  511
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## 5220 NP_001349068.1 XP_003198540.5  51.538  260 126  0  58  317  618  877
## 5221 NP_001349068.1 XP_003198540.5  46.809  282 146  1  38  315  146  427
## 5222 NP_001349068.1 XP_003198540.5  47.490  259 136  0  38  296  626  884
## 5223 NP_001349068.1 XP_003198540.5  46.181  288 123  1  60  315   56  343
## 5224 NP_001349068.1 XP_003198540.5  41.053  285 132  2  63  315   35  315
## 5225 NP_001349068.1 XP_003198540.5  42.262  168  93  1 146  313   34  197
## 5226 NP_001349068.1 XP_021331225.1  53.543  254 118  0  58  311  190  443
## 5227 NP_001349068.1 XP_021331225.1  51.119  268 131  0  48  315   96  363
## 5228 NP_001349068.1 XP_021331225.1  50.973  257 126  0  59  315   51  307
## 5229 NP_001349068.1 XP_021331225.1  51.538  260 126  0  60  319  136  395
## 5230 NP_001349068.1 XP_021331225.1  50.775  258 127  0  58  315   78  335
## 5231 NP_001349068.1 XP_021331225.1  51.504  266 129  0  50  315  154  419
## 5232 NP_001349068.1 XP_021331225.1  50.193  259 129  0  58  316  218  476
## 5233 NP_001349068.1 XP_021331225.1  50.000  256 128  0  58  313  246  501
## 5234 NP_001349068.1 XP_021331225.1  49.593  246 124  0  70  315   34  279
## 5235 NP_001349068.1 XP_021331225.1  49.356  233 117  1  98  329   34  266
## 5236 NP_001349068.1 XP_021331133.1  51.969  254 122  0  60  313   91  344
## 5237 NP_001349068.1 XP_021331133.1  48.913  276 138  2  39  313   43  316
## 5238 NP_001349068.1 XP_021331133.1  49.372  239 121  0  58  296  117  355
## 5239 NP_001349068.1 XP_021331133.1  49.393  247 124  1  88  333   63  309
## 5240 NP_001349068.1 NP_001314815.1  53.184  267 124  1  50  315   52  318
## 5241 NP_001349068.1 NP_001314815.1  52.361  233 111  0  58  290   89  321
## 5242 NP_001349068.1 NP_001314815.1  52.991  117  55  0 203  319   66  182
## 5243 NP_001349068.1 XP_017211047.2  54.264  258 118  0  58  315  313  570
## 5244 NP_001349068.1 XP_017211047.2  53.876  258 119  0  58  315  425  682
## 5245 NP_001349068.1 XP_017211047.2  53.876  258 119  0  58  315  229  486
## 5246 NP_001349068.1 XP_017211047.2  49.828  291 143  2  41  330  102  390
## 5247 NP_001349068.1 XP_017211047.2  52.326  258 123  0  58  315  341  598
## 5248 NP_001349068.1 XP_017211047.2  48.772  285 144  1  33  315  230  514
## 5249 NP_001349068.1 XP_017211047.2  46.865  303 160  1  29  330  172  474
## 5250 NP_001349068.1 XP_017211047.2  49.442  269 136  0  47  315  386  654
## 5251 NP_001349068.1 XP_017211047.2  51.550  258 125  0  58  315  369  626
## 5252 NP_001349068.1 XP_017211047.2  48.592  284 145  1  33  315  119  402
## 5253 NP_001349068.1 XP_017211047.2  50.388  258 128  0  58  315  285  542
## 5254 NP_001349068.1 XP_017211047.2  50.775  258 127  0  58  315   89  346
## 5255 NP_001349068.1 XP_017211047.2  50.000  258 129  0  58  315   33  290
## 5256 NP_001349068.1 XP_017211047.2  50.000  258 129  0  58  315    5  262
## 5257 NP_001349068.1 XP_017211047.2  51.502  233 113  0  58  290  453  685
## 5258 NP_001349068.1 XP_017211047.2  49.573  234 118  0  82  315    1  234
## 5259 NP_001349068.1 XP_017211047.2  38.182   55  33  1 280  333    3   57
## 5260 NP_001349068.1 XP_017209999.1  46.823  299 154  2  19  316   25  319
## 5261 NP_001349068.1 XP_017209999.1  47.603  292 145  2  30  313   53  344
## 5262 NP_001349068.1 XP_017209999.1  53.757  173  80  0 147  319   66  238
## 5263 NP_001349068.1 XP_021331302.1  53.101  258 121  0  58  315   81  338
## 5264 NP_001349068.1 XP_021331302.1  53.937  254 117  0  62  315    1  254
## 5265 NP_001349068.1 XP_021331302.1  52.326  258 123  0  58  315  137  394
## 5266 NP_001349068.1 XP_021331302.1  52.713  258 122  0  58  315  249  506
## 5267 NP_001349068.1 XP_021331302.1  52.326  258 123  0  58  315   25  282
## 5268 NP_001349068.1 XP_021331302.1  52.326  258 123  0  58  315  277  534
## 5269 NP_001349068.1 XP_021331302.1  52.326  258 123  0  58  315  221  478
## 5270 NP_001349068.1 XP_021331302.1  52.326  258 123  0  58  315  193  450
## 5271 NP_001349068.1 XP_021331302.1  52.326  258 123  0  58  315   53  310
## 5272 NP_001349068.1 XP_021331302.1  52.326  258 123  0  58  315  109  366
## 5273 NP_001349068.1 XP_021331302.1  52.326  258 123  0  58  315  305  562
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## 5274 NP_001349068.1 XP_021331302.1  51.938  258 124  0  58  315  165  422
## 5275 NP_001349068.1 XP_021331302.1  51.953  256 123  0  58  313  333  588
## 5276 NP_001349068.1 XP_021331302.1  49.782  229 115  0  58  286  361  589
## 5277 NP_001349068.1 XP_021331302.1  51.980  202  97  0 118  319    1  202
## 5278 NP_001349068.1 XP_021331302.1  50.340  147  73  0  58  204  445  591
## 5279 NP_001349068.1 XP_017211020.1  50.746  268 132  0  48  315   79  346
## 5280 NP_001349068.1 XP_017211020.1  51.172  256 125  0  60  315  119  374
## 5281 NP_001349068.1 XP_017211020.1  48.057  283 145  2  50  330   52  334
## 5282 NP_001349068.1 XP_017211020.1  53.879  232 107  0  59  290  146  377
## 5283 NP_001349068.1 XP_017211020.1  48.780  246 122  1  70  315   49  290
## 5284 NP_001349068.1 XP_017211020.1  52.451  204  97  0  58  261  173  376
## 5285 NP_001349068.1 XP_017211020.1  49.664  149  75  0  58  206  229  377
## 5286 NP_001349068.1 XP_021331048.1  53.101  258 121  0  58  315   60  317
## 5287 NP_001349068.1 XP_021331048.1  52.713  258 122  0  56  313    2  259
## 5288 NP_001349068.1 XP_021331048.1  52.326  258 123  0  58  315  144  401
## 5289 NP_001349068.1 XP_021331048.1  50.388  258 128  0  58  315   32  289
## 5290 NP_001349068.1 XP_021331048.1  50.775  258 127  0  58  315   88  345
## 5291 NP_001349068.1 XP_021331048.1  48.375  277 142  1  58  333  228  504
## 5292 NP_001349068.1 XP_021331048.1  49.225  258 131  0  58  315  284  541
## 5293 NP_001349068.1 XP_021331048.1  48.519  270 139  0  46  315  300  569
## 5294 NP_001349068.1 XP_021331048.1  48.837  258 132  0  58  315  200  457
## 5295 NP_001349068.1 XP_021331048.1  49.225  258 131  0  58  315  172  429
## 5296 NP_001349068.1 XP_021331048.1  47.292  277 145  1  58  333  116  392
## 5297 NP_001349068.1 XP_021331048.1  49.356  233 118  0  58  290  340  572
## 5298 NP_001349068.1 XP_021331048.1  46.914   81  42  1 251  330    1   81
## 5299 NP_001349068.1 XP_021331048.1  50.000   66  33  0  56  121  506  571
## 5300 NP_001349068.1 XP_021327225.1  53.101  258 121  0  58  315  145  402
## 5301 NP_001349068.1 XP_021327225.1  51.550  258 125  0  58  315  229  486
## 5302 NP_001349068.1 XP_021327225.1  53.101  258 121  0  58  315  313  570
## 5303 NP_001349068.1 XP_021327225.1  50.775  258 127  0  58  315   61  318
## 5304 NP_001349068.1 XP_021327225.1  53.150  254 119  0  58  311  425  678
## 5305 NP_001349068.1 XP_021327225.1  49.458  277 139  1  58  333  397  673
## 5306 NP_001349068.1 XP_021327225.1  50.370  270 134  0  46  315  105  374
## 5307 NP_001349068.1 XP_021327225.1  50.373  268 133  0  48  315   23  290
## 5308 NP_001349068.1 XP_021327225.1  50.000  268 134  0  48  315  191  458
## 5309 NP_001349068.1 XP_021327225.1  50.775  258 127  0  58  315  257  514
## 5310 NP_001349068.1 XP_021327225.1  50.000  268 134  0  48  315  359  626
## 5311 NP_001349068.1 XP_021327225.1  50.388  258 128  0  58  315   89  346
## 5312 NP_001349068.1 XP_021327225.1  48.889  270 138  0  46  315  273  542
## 5313 NP_001349068.1 XP_021327225.1  48.828  256 131  0  58  313    5  260
## 5314 NP_001349068.1 XP_021327225.1  52.991  234 110  0  82  315    1  234
## 5315 NP_001349068.1 XP_021331201.1  53.876  258 119  0  58  315  257  514
## 5316 NP_001349068.1 XP_021331201.1  53.053  262 123  0  58  319  341  602
## 5317 NP_001349068.1 XP_021331201.1  52.713  258 122  0  58  315   61  318
## 5318 NP_001349068.1 XP_021331201.1  50.545  275 135  1  60  333  147  421
## 5319 NP_001349068.1 XP_021331201.1  49.819  277 138  1  58  333  173  449
## 5320 NP_001349068.1 XP_021331201.1  53.488  258 120  0  58  315  117  374
## 5321 NP_001349068.1 XP_021331201.1  52.326  258 123  0  58  315  229  486
## 5322 NP_001349068.1 XP_021331201.1  52.713  258 122  0  58  315  201  458
## 5323 NP_001349068.1 XP_021331201.1  50.181  277 137  1  58  333   89  365
## 5324 NP_001349068.1 XP_021331201.1  51.145  262 128  0  58  319  397  658
## 5325 NP_001349068.1 XP_021331201.1  51.550  258 125  0  58  315   33  290
## 5326 NP_001349068.1 XP_021331201.1  48.736  277 141  1  58  333    5  281
## 5327 NP_001349068.1 XP_021331201.1  50.000  258 129  0  58  315  313  570
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## 5328 NP_001349068.1 XP_021331201.1  52.569  253 119  1  82  333    1  253
## 5329 NP_001349068.1 XP_021331201.1  48.837  258 132  0  58  315  425  682
## 5330 NP_001349068.1 XP_021331201.1  46.494  271 145  0  45  315  496  766
## 5331 NP_001349068.1 XP_021331201.1  47.266  256 135  0  58  313  537  792
## 5332 NP_001349068.1 XP_021331201.1  42.587  317 153  2  58  345  453  769
## 5333 NP_001349068.1 XP_021331201.1  46.124  258 139  0  58  315  593  850
## 5334 NP_001349068.1 XP_021331201.1  48.000  175  91  0  58  232  677  851
## 5335 NP_001349068.1 XP_021331032.1  52.713  258 122  0  58  315  143  400
## 5336 NP_001349068.1 XP_021331032.1  48.881  268 137  0  48  315   77  344
## 5337 NP_001349068.1 XP_021331032.1  52.713  258 122  0  58  315  171  428
## 5338 NP_001349068.1 XP_021331032.1  49.248  266 135  0  50  315  107  372
## 5339 NP_001349068.1 XP_021331032.1  47.273  275 144  1  60  333   61  335
## 5340 NP_001349068.1 XP_021331032.1  46.853  286 124  1  58  315  255  540
## 5341 NP_001349068.1 XP_021331032.1  51.938  258 124  0  58  315  227  484
## 5342 NP_001349068.1 XP_021331032.1  46.205  303 116  2  58  313  339  641
## 5343 NP_001349068.1 XP_021331032.1  46.290  283 124  1  58  312  283  565
## 5344 NP_001349068.1 XP_021331032.1  47.727  220  96  1  58  258  423  642
## 5345 NP_001349068.1 XP_021331032.1  40.000   45  27  0  46   90  598  642
## 5346 NP_001349068.1 XP_021331392.1  49.827  289 144  1  46  333   49  337
## 5347 NP_001349068.1 XP_021331392.1  49.281  278 141  0  38  315   13  290
## 5348 NP_001349068.1 XP_021331392.1  51.938  258 124  0  58  315    5  262
## 5349 NP_001349068.1 XP_021331392.1  50.391  256 127  0  58  313  117  372
## 5350 NP_001349068.1 XP_021331392.1  52.991  234 110  0  82  315    1  234
## 5351 NP_001349068.1 XP_021331304.1  52.157  255 122  0  58  312  145  399
## 5352 NP_001349068.1 XP_021331304.1  50.730  274 134  1  58  330  117  390
## 5353 NP_001349068.1 XP_021331304.1  50.775  258 127  0  56  313   59  316
## 5354 NP_001349068.1 XP_021331304.1  48.462  260 134  0  56  315   31  290
## 5355 NP_001349068.1 XP_021331304.1  50.198  253 126  0  63  315   10  262
## 5356 NP_001349068.1 XP_021331304.1  48.188  276 142  1  56  330   87  362
## 5357 NP_001349068.1 XP_021331304.1  49.573  234 118  0  82  315    1  234
## 5358 NP_001349068.1 XP_021331304.1  45.082  122  67  0 195  316    2  123
## 5359 NP_001349068.1 XP_021331433.1  55.378  251 112  0  65  315    2  252
## 5360 NP_001349068.1 XP_021331433.1  53.488  258 120  0  58  315   23  280
## 5361 NP_001349068.1 XP_021331433.1  52.344  256 122  0  60  315   81  336
## 5362 NP_001349068.1 XP_021331433.1  46.326  313 164  2  46  354   95  407
## 5363 NP_001349068.1 XP_021331433.1  49.225  258 131  0  58  315   51  308
## 5364 NP_001349068.1 XP_021331433.1  52.381   84  40  0 232  315    1   84
## 5365 NP_001349068.1 NP_001307132.1  49.064  267 135  1  50  315   52  318
## 5366 NP_001349068.1 NP_001307132.1  49.793  241 121  0  48  288   79  319
## 5367 NP_001349068.1 NP_001307132.1  48.990  198 101  0 119  316   66  263
## 5368 NP_001349068.1 NP_001307132.1  54.286  175  80  0  61  235  148  322
## 5369 NP_001349068.1 NP_001307132.1  48.387   93  48  0  58  150  229  321
## 5370 NP_001349068.1 XP_017211286.1  52.434  267 126  1  50  315   52  318
## 5371 NP_001349068.1 XP_017211286.1  51.562  256 124  0  58  313   89  344
## 5372 NP_001349068.1 XP_017211286.1  53.712  229 106  0  58  286  117  345
## 5373 NP_001349068.1 XP_017211286.1  52.381  147  70  0  58  204  201  347
## 5374 NP_001349068.1 XP_021331331.1  51.460  274 132  1  58  330  201  474
## 5375 NP_001349068.1 XP_021331331.1  51.765  255 123  0  58  312  229  483
## 5376 NP_001349068.1 XP_021331331.1  48.872  266 136  0  50  315  137  402
## 5377 NP_001349068.1 XP_021331331.1  48.000  275 142  1  60  333  175  449
## 5378 NP_001349068.1 XP_021331331.1  50.388  258 128  0  58  315   61  318
## 5379 NP_001349068.1 XP_021331331.1  46.739  276 141  1  44  313   69  344
## 5380 NP_001349068.1 XP_021331331.1  47.940  267 139  0  49  315  108  374
## 5381 NP_001349068.1 XP_021331331.1  45.522  268 146  0  48  315   23  290
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## 5382 NP_001349068.1 XP_021331331.1  45.312  256 140  0  60  315    7  262
## 5383 NP_001349068.1 XP_021331331.1  47.436  234 123  0  82  315    1  234
## 5384 NP_001349068.1 XP_021331166.1  54.688  256 116  0  60  315  147  402
## 5385 NP_001349068.1 XP_021331166.1  49.640  278 139  1  58  334   61  338
## 5386 NP_001349068.1 XP_021331166.1  55.039  258 116  0  58  315  369  626
## 5387 NP_001349068.1 XP_021331166.1  52.713  258 122  0  58  315  397  654
## 5388 NP_001349068.1 XP_021331166.1  52.713  258 122  0  58  315  117  374
## 5389 NP_001349068.1 XP_021331166.1  52.510  259 123  0  58  316  481  739
## 5390 NP_001349068.1 XP_021331166.1  51.625  277 133  1  58  333  341  617
## 5391 NP_001349068.1 XP_021331166.1  53.125  256 120  0  58  313  509  764
## 5392 NP_001349068.1 XP_021331166.1  50.182  275 136  1  60  333  427  701
## 5393 NP_001349068.1 XP_021331166.1  52.326  258 123  0  58  315   89  346
## 5394 NP_001349068.1 XP_021331166.1  52.326  258 123  0  58  315  313  570
## 5395 NP_001349068.1 XP_021331166.1  51.625  277 133  1  58  333  229  505
## 5396 NP_001349068.1 XP_021331166.1  53.101  258 121  0  58  315  453  710
## 5397 NP_001349068.1 XP_021331166.1  50.958  261 128  0  58  318   33  293
## 5398 NP_001349068.1 XP_021331166.1  52.713  258 122  0  58  315  285  542
## 5399 NP_001349068.1 XP_021331166.1  49.819  277 138  1  58  333  257  533
## 5400 NP_001349068.1 XP_021331166.1  48.727  275 140  1  58  331    5  279
## 5401 NP_001349068.1 XP_021331166.1  47.797  295 152  2  40  333  184  477
## 5402 NP_001349068.1 XP_021331166.1  51.779  253 121  1  82  333    1  253
## 5403 NP_001349068.1 XP_021331253.1  51.362  257 125  0  59  315  112  368
## 5404 NP_001349068.1 XP_021331253.1  50.000  256 128  0  58  313   55  310
## 5405 NP_001349068.1 XP_021331253.1  52.344  256 122  0  58  313   27  282
## 5406 NP_001349068.1 XP_021331253.1  49.609  256 129  0  58  313   83  338
## 5407 NP_001349068.1 XP_021331253.1  50.198  253 126  0  59  311  140  392
## 5408 NP_001349068.1 XP_021331253.1  47.232  271 143  0  46  316  155  425
## 5409 NP_001349068.1 XP_021331253.1  48.699  269 137  1  63  330    4  272
## 5410 NP_001349068.1 XP_017211261.1  47.826  299 151  2  19  316   25  319
## 5411 NP_001349068.1 XP_017211261.1  51.953  256 123  0  58  313  117  372
## 5412 NP_001349068.1 XP_017211261.1  49.064  267 136  0  50  316   81  347
## 5413 NP_001349068.1 XP_017211261.1  50.289  173  86  0 147  319   66  238
## 5414 NP_001349068.1 XP_021331366.1  55.242  248 111  0  68  315    3  250
## 5415 NP_001349068.1 XP_021331366.1  50.373  268 133  0  48  315   11  278
## 5416 NP_001349068.1 XP_021331366.1  51.953  256 123  0  58  313   77  332
## 5417 NP_001349068.1 XP_021331366.1  51.163  258 126  0  58  315   49  306
## 5418 NP_001349068.1 XP_021331366.1  49.818  275 136  2  58  330  133  407
## 5419 NP_001349068.1 XP_021331366.1  52.252  222 106  0  94  315    1  222
## 5420 NP_001349068.1 XP_021331366.1  51.000  200  97  1  58  256  217  416
## 5421 NP_001349068.1 XP_021331366.1  46.000  150  80  1  60  208  275  424
## 5422 NP_001349068.1 XP_021331366.1  37.778   45  27  1 290  333    1   45
## 5423 NP_001349068.1 XP_009298780.3  51.550  258 125  0  58  315   25  282
## 5424 NP_001349068.1 XP_009298780.3  51.550  258 125  0  58  315   81  338
## 5425 NP_001349068.1 XP_009298780.3  50.388  258 128  0  58  315  137  394
## 5426 NP_001349068.1 XP_009298780.3  52.362  254 121  0  62  315    1  254
## 5427 NP_001349068.1 XP_009298780.3  50.965  259 127  0  58  316  109  367
## 5428 NP_001349068.1 XP_009298780.3  50.400  250 124  0  58  307  165  414
## 5429 NP_001349068.1 XP_009298780.3  50.661  227 112  0  90  316    1  227
## 5430 NP_001349068.1 XP_009298780.3  49.505  202 102  0 118  319    1  202
## 5431 NP_001349068.1 XP_021331165.1  54.264  258 118  0  58  315  173  430
## 5432 NP_001349068.1 XP_021331165.1  51.880  266 128  0  50  315  137  402
## 5433 NP_001349068.1 XP_021331165.1  53.543  254 118  0  58  311  538  791
## 5434 NP_001349068.1 XP_021331165.1  50.388  258 128  0  58  315   89  346
## 5435 NP_001349068.1 XP_021331165.1  50.965  259 127  0  58  316  229  487
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## 5436 NP_001349068.1 XP_021331165.1  47.653  277 144  1  58  333   61  337
## 5437 NP_001349068.1 XP_021331165.1  49.810  263 131  1  58  319  481  743
## 5438 NP_001349068.1 XP_021331165.1  49.225  258 131  0  58  315   33  290
## 5439 NP_001349068.1 XP_021331165.1  49.807  259 130  0  58  316  566  824
## 5440 NP_001349068.1 XP_021331165.1  51.779  253 122  0  63  315  515  767
## 5441 NP_001349068.1 XP_021331165.1  50.391  256 127  0  58  313  257  512
## 5442 NP_001349068.1 XP_021331165.1  50.000  256 128  0  58  313  594  849
## 5443 NP_001349068.1 XP_021331165.1  48.438  256 132  0  60  315    7  262
## 5444 NP_001349068.1 XP_021331165.1  48.718  234 120  0  82  315    1  234
## 5445 NP_001349068.1 XP_021331323.1  50.775  258 127  0  58  315    8  265
## 5446 NP_001349068.1 XP_021331323.1  52.016  248 119  0  58  305   36  283
## 5447 NP_001349068.1 XP_021331323.1  51.489  235 114  0  81  315    3  237
## 5448 NP_001349068.1 XP_021331323.1  49.091  110  56  0  58  167  176  285
## 5449 NP_001349068.1 XP_017211176.1  51.145  262 122  1  58  313   88  349
## 5450 NP_001349068.1 XP_017211176.1  44.408  304 159  3  19  316   25  324
## 5451 NP_001349068.1 XP_017211176.1  52.423  227 108  0  93  319   67  293
## 5452 NP_001349068.1 XP_017211176.1  44.118  170  89  1  38  201  180  349
## 5453 NP_001349068.1 XP_021330537.1  52.734  256 121  0  60  315  109  364
## 5454 NP_001349068.1 XP_021330537.1  48.134  268 139  0  48  315   69  336
## 5455 NP_001349068.1 XP_021330537.1  50.187  267 132  1  50  315   42  308
## 5456 NP_001349068.1 XP_021330537.1  51.948  231 111  0  60  290  137  367
## 5457 NP_001349068.1 XP_021330537.1  48.529  204 105  0  58  261  163  366
## 5458 NP_001349068.1 XP_021330537.1  46.203  158  85  0  49  206  210  367
## 5459 NP_001349068.1 XP_021330537.1  47.863  117  61  0 200  316   53  169
## 5460 NP_001349068.1 XP_021326474.1  52.734  256 121  0  58  313    5  260
## 5461 NP_001349068.1 XP_021326474.1  50.769  260 128  0  58  317   33  292
## 5462 NP_001349068.1 XP_021326474.1  56.034  232 102  0  82  313    1  232
## 5463 NP_001349068.1 XP_021331239.1  49.635  274 137  1  58  330    4  277
## 5464 NP_001349068.1 XP_021331239.1  51.550  258 125  0  58  315   32  289
## 5465 NP_001349068.1 XP_021331239.1  51.550  258 125  0  58  315   60  317
## 5466 NP_001349068.1 XP_021331239.1  52.381  231 110  0  85  315    3  233
## 5467 NP_001349068.1 XP_021331239.1  51.724  232 112  0  58  289   88  319
## 5468 NP_001349068.1 XP_021331239.1  50.490  204 101  0 112  315    2  205
## 5469 NP_001349068.1 XP_021331239.1  50.000   74  37  0  49  122  247  320
## 5470 NP_001349068.1 XP_021331239.1  49.231   65  33  0 251  315    1   65
## 5471 NP_001349068.1 XP_021331041.1  49.814  269 134  1  63  330  122  390
## 5472 NP_001349068.1 XP_021331041.1  50.000  254 127  0  58  311  145  398
## 5473 NP_001349068.1 XP_021331041.1  48.954  239 122  0  58  296  173  411
## 5474 NP_001349068.1 XP_021331266.1  51.986  277 132  1  58  333  576  852
## 5475 NP_001349068.1 XP_021331266.1  52.708  277 130  1  58  333  604  880
## 5476 NP_001349068.1 XP_021331266.1  53.876  258 119  0  58  315 1444 1701
## 5477 NP_001349068.1 XP_021331266.1  52.434  267 127  0  49  315  679  945
## 5478 NP_001349068.1 XP_021331266.1  52.555  274 129  1  58  330  520  793
## 5479 NP_001349068.1 XP_021331266.1  53.876  258 119  0  58  315 1416 1673
## 5480 NP_001349068.1 XP_021331266.1  53.876  258 119  0  58  315  492  749
## 5481 NP_001349068.1 XP_021331266.1  50.903  277 135  1  58  333  632  908
## 5482 NP_001349068.1 XP_021331266.1  53.101  258 121  0  58  315  660  917
## 5483 NP_001349068.1 XP_021331266.1  53.876  258 119  0  58  315 2312 2569
## 5484 NP_001349068.1 XP_021331266.1  51.825  274 131  1  58  330 2116 2389
## 5485 NP_001349068.1 XP_021331266.1  53.101  258 121  0  58  315 2424 2681
## 5486 NP_001349068.1 XP_021331266.1  51.311  267 130  0  49  315  763 1029
## 5487 NP_001349068.1 XP_021331266.1  51.625  277 133  1  58  333  716  992
## 5488 NP_001349068.1 XP_021331266.1  53.101  258 121  0  58  315 2340 2597
## 5489 NP_001349068.1 XP_021331266.1  52.713  258 122  0  58  315  548  805
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## 5490 NP_001349068.1 XP_021331266.1  53.101  258 121  0  58  315 2452 2709
## 5491 NP_001349068.1 XP_021331266.1  48.951  286 145  1  49  333  791 1076
## 5492 NP_001349068.1 XP_021331266.1  53.101  258 121  0  58  315  436  693
## 5493 NP_001349068.1 XP_021331266.1  51.737  259 125  0  58  316 1360 1618
## 5494 NP_001349068.1 XP_021331266.1  53.876  258 119  0  58  315  464  721
## 5495 NP_001349068.1 XP_021331266.1  53.101  258 121  0  58  315 2228 2485
## 5496 NP_001349068.1 XP_021331266.1  53.876  258 119  0  58  315  744 1001
## 5497 NP_001349068.1 XP_021331266.1  53.101  258 121  0  58  315 2256 2513
## 5498 NP_001349068.1 XP_021331266.1  52.344  256 122  0  60  315 2202 2457
## 5499 NP_001349068.1 XP_021331266.1  51.938  258 124  0  58  315 1388 1645
## 5500 NP_001349068.1 XP_021331266.1  53.125  256 120  0  58  313  884 1139
## 5501 NP_001349068.1 XP_021331266.1  51.880  266 128  0  50  315  372  637
## 5502 NP_001349068.1 XP_021331266.1  53.125  256 120  0  58  313 1808 2063
## 5503 NP_001349068.1 XP_021331266.1  51.938  258 124  0  58  315 2396 2653
## 5504 NP_001349068.1 XP_021331266.1  52.344  256 122  0  58  313 1864 2119
## 5505 NP_001349068.1 XP_021331266.1  50.181  277 137  1  58  333  856 1132
## 5506 NP_001349068.1 XP_021331266.1  49.807  259 130  0  58  316 1192 1450
## 5507 NP_001349068.1 XP_021331266.1  51.953  256 123  0  58  313 1836 2091
## 5508 NP_001349068.1 XP_021331266.1  50.360  278 137  1  58  334  408  685
## 5509 NP_001349068.1 XP_021331266.1  53.101  258 121  0  58  315  828 1085
## 5510 NP_001349068.1 XP_021331266.1  52.734  256 121  0  60  315 2510 2765
## 5511 NP_001349068.1 XP_021331266.1  51.938  258 124  0  58  315 2368 2625
## 5512 NP_001349068.1 XP_021331266.1  50.347  288 139  2  58  341 2592 2879
## 5513 NP_001349068.1 XP_021331266.1  52.326  258 123  0  58  315 1500 1757
## 5514 NP_001349068.1 XP_021331266.1  50.775  258 127  0  58  315 2284 2541
## 5515 NP_001349068.1 XP_021331266.1  50.719  278 136  1  58  334 1780 2057
## 5516 NP_001349068.1 XP_021331266.1  51.562  256 124  0  60  315 1530 1785
## 5517 NP_001349068.1 XP_021331266.1  51.163  258 126  0  58  315 2172 2429
## 5518 NP_001349068.1 XP_021331266.1  50.781  256 126  0  58  313 1892 2147
## 5519 NP_001349068.1 XP_021331266.1  50.000  258 129  0  58  315 2144 2401
## 5520 NP_001349068.1 XP_021331266.1  49.225  258 131  0  58  315 1276 1533
## 5521 NP_001349068.1 XP_021331266.1  48.507  268 138  0  48  315 1238 1505
## 5522 NP_001349068.1 XP_021331266.1  50.388  258 128  0  58  315 2480 2737
## 5523 NP_001349068.1 XP_021331266.1  51.938  258 124  0  58  315 2564 2821
## 5524 NP_001349068.1 XP_021331266.1  51.550  258 125  0  58  315  352  609
## 5525 NP_001349068.1 XP_021331266.1  51.938  258 124  0  58  315 2536 2793
## 5526 NP_001349068.1 XP_021331266.1  50.775  258 127  0  58  315 1332 1589
## 5527 NP_001349068.1 XP_021331266.1  51.172  256 125  0  58  313  968 1223
## 5528 NP_001349068.1 XP_021331266.1  49.612  258 130  0  58  315  912 1169
## 5529 NP_001349068.1 XP_021331266.1  50.752  266 131  0  50  315 1744 2009
## 5530 NP_001349068.1 XP_021331266.1  49.640  278 139  1  58  334  324  601
## 5531 NP_001349068.1 XP_021331266.1  48.450  258 133  0  58  315 1304 1561
## 5532 NP_001349068.1 XP_021331266.1  51.550  258 125  0  58  315  268  525
## 5533 NP_001349068.1 XP_021331266.1  48.828  256 131  0  58  313 1080 1335
## 5534 NP_001349068.1 XP_021331266.1  47.080  274 144  1  58  330 2060 2333
## 5535 NP_001349068.1 XP_021331266.1  45.455  319 165  3  21  330 1567 1885
## 5536 NP_001349068.1 XP_021331266.1  48.828  256 131  0  58  313 1920 2175
## 5537 NP_001349068.1 XP_021331266.1  46.154  286 126  1  58  315 1948 2233
## 5538 NP_001349068.1 XP_021331266.1  48.837  258 132  0  58  315 2032 2289
## 5539 NP_001349068.1 XP_021331266.1  50.000  258 129  0  58  315  296  553
## 5540 NP_001349068.1 XP_021331266.1  47.674  258 135  0  58  315 2088 2345
## 5541 NP_001349068.1 XP_021331266.1  46.763  278 142  1  44  315 1004 1281
## 5542 NP_001349068.1 XP_021331266.1  51.163  258 126  0  58  315 1724 1981
## 5543 NP_001349068.1 XP_021331266.1  50.775  258 127  0  58  315  240  497
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## 5544 NP_001349068.1 XP_021331266.1  49.035  259 132  0  58  316 1108 1366
## 5545 NP_001349068.1 XP_021331266.1  48.450  258 133  0  58  315  184  441
## 5546 NP_001349068.1 XP_021331266.1  48.062  258 134  0  58  315 2004 2261
## 5547 NP_001349068.1 XP_021331266.1  49.225  258 131  0  58  315 1668 1925
## 5548 NP_001349068.1 XP_021331266.1  48.062  258 134  0  58  315  128  385
## 5549 NP_001349068.1 XP_021331266.1  44.403  268 149  0  48  315 1154 1421
## 5550 NP_001349068.1 XP_021331266.1  49.281  278 140  1  58  334 1696 1973
## 5551 NP_001349068.1 XP_021331266.1  48.047  256 133  0  58  313  996 1251
## 5552 NP_001349068.1 XP_021331266.1  44.922  256 141  0  60  315  102  357
## 5553 NP_001349068.1 XP_021331266.1  43.015  272 154  1  63  333   77  348
## 5554 NP_001349068.1 XP_017211125.2  53.150  254 119  0  62  315    1  254
## 5555 NP_001349068.1 XP_017211125.2  50.000  262 131  0  58  319   25  286
## 5556 NP_001349068.1 XP_017211125.2  49.200  250 127  0  58  307   53  302
## 5557 NP_001349068.1 XP_021331140.1  49.826  287 115  2  58  315   17  303
## 5558 NP_001349068.1 XP_021331140.1  51.362  257 125  0  59  315  103  359
## 5559 NP_001349068.1 XP_021331140.1  51.163  258 126  0  58  315  130  387
## 5560 NP_001349068.1 XP_021331140.1  51.012  247 120  1  70  315    1  247
## 5561 NP_001349068.1 XP_021331140.1  51.948  231 111  0  60  290  160  390
## 5562 NP_001349068.1 XP_021331140.1  53.202  203  95  0  59  261  187  389
## 5563 NP_001349068.1 XP_021331140.1  52.841  176  83  0  58  233  214  389
## 5564 NP_001349068.1 XP_021331140.1  50.336  149  74  0  58  206  242  390
## 5565 NP_001349068.1 XP_021331425.1  50.388  258 128  0  58  315   30  287
## 5566 NP_001349068.1 XP_021331425.1  51.562  256 124  0  58  313   86  341
## 5567 NP_001349068.1 XP_021331425.1  51.550  258 125  0  58  315   58  315
## 5568 NP_001349068.1 XP_021331425.1  51.362  257 125  0  63  319    7  263
## 5569 NP_001349068.1 XP_021331425.1  48.276  232 120  0  58  289  114  345
## 5570 NP_001349068.1 XP_021331425.1  47.619   63  33  0  60  122  284  346
## 5571 NP_001349068.1 XP_021331110.1  54.264  258 118  0  58  315  583  840
## 5572 NP_001349068.1 XP_021331110.1  53.817  262 121  0  58  319  555  816
## 5573 NP_001349068.1 XP_021331110.1  46.535  303 154  2  21  315  370  672
## 5574 NP_001349068.1 XP_021331110.1  47.492  299 149  2  21  311  594  892
## 5575 NP_001349068.1 XP_021331110.1  50.903  277 135  1  58  333  471  747
## 5576 NP_001349068.1 XP_021331110.1  52.734  256 121  0  58  313  331  586
## 5577 NP_001349068.1 XP_021331110.1  52.290  262 125  0  58  319  527  788
## 5578 NP_001349068.1 XP_021331110.1  44.839  310 164  2   6  315  202  504
## 5579 NP_001349068.1 XP_021331110.1  49.458  277 139  1  58  333  443  719
## 5580 NP_001349068.1 XP_021331110.1  50.388  258 128  0  58  315  163  420
## 5581 NP_001349068.1 XP_021331110.1  51.163  258 126  0  58  315  135  392
## 5582 NP_001349068.1 XP_021331110.1  50.000  258 129  0  58  315  275  532
## 5583 NP_001349068.1 XP_021331110.1  47.445  274 144  0  46  319  487  760
## 5584 NP_001349068.1 XP_021331110.1  50.584  257 127  0  60  316  669  925
## 5585 NP_001349068.1 XP_021331110.1  50.000  260 130  0  56  315  301  560
## 5586 NP_001349068.1 XP_021331110.1  50.781  256 126  0  58  313  107  362
## 5587 NP_001349068.1 XP_021331110.1  51.172  256 125  0  58  313  695  950
## 5588 NP_001349068.1 XP_021331110.1  50.988  253 124  0  63  315   56  308
## 5589 NP_001349068.1 XP_021331110.1  49.027  257 131  0  59  315   80  336
## 5590 NP_001349068.1 XP_021331413.1  52.222  270 129  0  46  315  504  773
## 5591 NP_001349068.1 XP_021331413.1  54.651  258 117  0  58  315  348  605
## 5592 NP_001349068.1 XP_021331413.1  55.039  258 116  0  58  315  208  465
## 5593 NP_001349068.1 XP_021331413.1  51.481  270 131  0  46  315  532  801
## 5594 NP_001349068.1 XP_021331413.1  53.876  258 119  0  58  315  600  857
## 5595 NP_001349068.1 XP_021331413.1  52.060  267 128  0  49  315  423  689
## 5596 NP_001349068.1 XP_021331413.1  52.713  258 122  0  58  315  292  549
## 5597 NP_001349068.1 XP_021331413.1  53.876  258 119  0  58  315  180  437
```

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## 5598 NP_001349068.1 XP_021331413.1  53.516  256 119  0  58  313  404  659
## 5599 NP_001349068.1 XP_021331413.1  53.488  258 120  0  58  315  124  381
## 5600 NP_001349068.1 XP_021331413.1  52.713  258 122  0  58  315  320  577
## 5601 NP_001349068.1 XP_021331413.1  53.101  258 121  0  58  315  376  633
## 5602 NP_001349068.1 XP_021331413.1  49.477  287 145  0  29  315  123  409
## 5603 NP_001349068.1 XP_021331413.1  51.481  270 131  0  46  315   28  297
## 5604 NP_001349068.1 XP_021331413.1  52.713  258 122  0  58  315  236  493
## 5605 NP_001349068.1 XP_021331413.1  53.101  258 121  0  58  315   68  325
## 5606 NP_001349068.1 XP_021331413.1  49.630  270 136  0  46  315   84  353
## 5607 NP_001349068.1 XP_021331413.1  52.326  258 123  0  58  315   12  269
## 5608 NP_001349068.1 XP_021331413.1  50.542  277 134  1  58  334  628  901
## 5609 NP_001349068.1 XP_021331413.1  51.938  258 124  0  58  315  460  717
## 5610 NP_001349068.1 XP_021331413.1  47.735  287 150  0  29  315  459  745
## 5611 NP_001349068.1 XP_021331413.1  52.713  258 122  0  58  315  264  521
## 5612 NP_001349068.1 XP_021331413.1  52.941  238 112  0  76  313    2  239
## 5613 NP_001349068.1 XP_021331413.1  47.429  175  91  1 160  333    2  176
## 5614 NP_001349068.1 XP_021329626.1  52.734  256 121  0  60  315  109  364
## 5615 NP_001349068.1 XP_021329626.1  48.134  268 139  0  48  315   69  336
## 5616 NP_001349068.1 XP_021329626.1  49.813  267 133  1  50  315   42  308
## 5617 NP_001349068.1 XP_021329626.1  51.724  232 112  0  60  291  137  368
## 5618 NP_001349068.1 XP_021329626.1  48.529  204 105  0  58  261  163  366
## 5619 NP_001349068.1 XP_021329626.1  46.203  158  85  0  49  206  210  367
## 5620 NP_001349068.1 XP_021329626.1  46.721  122  65  0  58  179  247  368
## 5621 NP_001349068.1 XP_021329626.1  47.863  117  61  0 200  316   53  169
## 5622 NP_001349068.1 XP_021329625.1  52.734  256 121  0  60  315  109  364
## 5623 NP_001349068.1 XP_021329625.1  48.134  268 139  0  48  315   69  336
## 5624 NP_001349068.1 XP_021329625.1  49.813  267 133  1  50  315   42  308
## 5625 NP_001349068.1 XP_021329625.1  51.724  232 112  0  60  291  137  368
## 5626 NP_001349068.1 XP_021329625.1  48.529  204 105  0  58  261  163  366
## 5627 NP_001349068.1 XP_021329625.1  46.203  158  85  0  49  206  210  367
## 5628 NP_001349068.1 XP_021329625.1  46.721  122  65  0  58  179  247  368
## 5629 NP_001349068.1 XP_021329625.1  47.863  117  61  0 200  316   53  169
## 5630 NP_001349068.1 XP_021329624.1  52.734  256 121  0  60  315  109  364
## 5631 NP_001349068.1 XP_021329624.1  48.134  268 139  0  48  315   69  336
## 5632 NP_001349068.1 XP_021329624.1  49.813  267 133  1  50  315   42  308
## 5633 NP_001349068.1 XP_021329624.1  51.724  232 112  0  60  291  137  368
## 5634 NP_001349068.1 XP_021329624.1  48.529  204 105  0  58  261  163  366
## 5635 NP_001349068.1 XP_021329624.1  46.203  158  85  0  49  206  210  367
## 5636 NP_001349068.1 XP_021329624.1  46.721  122  65  0  58  179  247  368
## 5637 NP_001349068.1 XP_021329624.1  47.863  117  61  0 200  316   53  169
## 5638 NP_001349068.1 XP_021329623.1  52.734  256 121  0  60  315  109  364
## 5639 NP_001349068.1 XP_021329623.1  48.134  268 139  0  48  315   69  336
## 5640 NP_001349068.1 XP_021329623.1  49.813  267 133  1  50  315   42  308
## 5641 NP_001349068.1 XP_021329623.1  51.724  232 112  0  60  291  137  368
## 5642 NP_001349068.1 XP_021329623.1  48.529  204 105  0  58  261  163  366
## 5643 NP_001349068.1 XP_021329623.1  46.203  158  85  0  49  206  210  367
## 5644 NP_001349068.1 XP_021329623.1  46.721  122  65  0  58  179  247  368
## 5645 NP_001349068.1 XP_021329623.1  47.863  117  61  0 200  316   53  169
## 5646 NP_001349068.1 XP_005157357.4  53.125  256 120  0  60  315  136  391
## 5647 NP_001349068.1 XP_005157357.4  51.264  277 134  1  58  333   22  298
## 5648 NP_001349068.1 XP_005157357.4  53.876  258 119  0  58  315  162  419
## 5649 NP_001349068.1 XP_005157357.4  53.101  258 121  0  58  315  330  587
## 5650 NP_001349068.1 XP_005157357.4  51.550  258 125  0  58  315  218  475
## 5651 NP_001349068.1 XP_005157357.4  52.734  256 121  0  60  315   80  335
```

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## 5652 NP_001349068.1 XP_005157357.4  45.752  306 158  2  18  315  198  503
## 5653 NP_001349068.1 XP_005157357.4  50.730  274 134  1  58  330  106  379
## 5654 NP_001349068.1 XP_005157357.4  51.163  258 126  0  58  315  274  531
## 5655 NP_001349068.1 XP_005157357.4  50.187  267 133  0  49  315  293  559
## 5656 NP_001349068.1 XP_005157357.4  51.394  251 122  0  65  315    1  251
## 5657 NP_001349068.1 XP_005157357.4  51.931  233 112  0  58  290  358  590
## 5658 NP_001349068.1 XP_005157357.4  47.867  211 109  1 121  330    1  211
## 5659 NP_001349068.1 XP_009299203.2  50.000  270 135  0  46  315  255  524
## 5660 NP_001349068.1 XP_009299203.2  51.969  254 122  0  60  313  213  466
## 5661 NP_001349068.1 XP_009299203.2  49.064  267 136  0  49  315  118  384
## 5662 NP_001349068.1 XP_009299203.2  48.905  274 139  1  40  313  138  410
## 5663 NP_001349068.1 XP_009299203.2  51.550  258 125  0  58  315  183  440
## 5664 NP_001349068.1 XP_009299203.2  51.550  258 125  0  58  315  239  496
## 5665 NP_001349068.1 XP_009299203.2  55.365  233 104  0  58  290  295  527
## 5666 NP_001349068.1 XP_009299203.2  50.000  256 128  0  60  315  101  356
## 5667 NP_001349068.1 XP_009299203.2  43.493  292 160  1  24  315   42  328
## 5668 NP_001349068.1 XP_021327017.1  50.000  268 134  0  48  315  120  387
## 5669 NP_001349068.1 XP_021327017.1  47.703  283 148  0  28  310  128  410
## 5670 NP_001349068.1 XP_021327017.1  50.000  258 129  0  58  315   74  331
## 5671 NP_001349068.1 XP_021327017.1  49.219  256 130  0  60  315  104  359
## 5672 NP_001349068.1 XP_021327017.1  48.649  259 132  1  58  315   45  303
## 5673 NP_001349068.1 XP_021327017.1  47.234  235 124  0  81  315   41  275
## 5674 NP_001349068.1 XP_021327016.1  50.000  268 134  0  48  315  120  387
## 5675 NP_001349068.1 XP_021327016.1  47.703  283 148  0  28  310  128  410
## 5676 NP_001349068.1 XP_021327016.1  50.000  258 129  0  58  315   74  331
## 5677 NP_001349068.1 XP_021327016.1  49.219  256 130  0  60  315  104  359
## 5678 NP_001349068.1 XP_021327016.1  48.649  259 132  1  58  315   45  303
## 5679 NP_001349068.1 XP_021327016.1  47.234  235 124  0  81  315   41  275
## 5680 NP_001349068.1 XP_021327015.1  50.000  268 134  0  48  315  120  387
## 5681 NP_001349068.1 XP_021327015.1  47.703  283 148  0  28  310  128  410
## 5682 NP_001349068.1 XP_021327015.1  50.000  258 129  0  58  315   74  331
## 5683 NP_001349068.1 XP_021327015.1  49.219  256 130  0  60  315  104  359
## 5684 NP_001349068.1 XP_021327015.1  48.649  259 132  1  58  315   45  303
## 5685 NP_001349068.1 XP_021327015.1  47.234  235 124  0  81  315   41  275
## 5686 NP_001349068.1 XP_021327014.1  50.000  268 134  0  48  315  120  387
## 5687 NP_001349068.1 XP_021327014.1  47.703  283 148  0  28  310  128  410
## 5688 NP_001349068.1 XP_021327014.1  50.000  258 129  0  58  315   74  331
## 5689 NP_001349068.1 XP_021327014.1  49.219  256 130  0  60  315  104  359
## 5690 NP_001349068.1 XP_021327014.1  48.649  259 132  1  58  315   45  303
## 5691 NP_001349068.1 XP_021327014.1  47.234  235 124  0  81  315   41  275
## 5692 NP_001349068.1 XP_021327013.1  50.000  268 134  0  48  315  120  387
## 5693 NP_001349068.1 XP_021327013.1  47.703  283 148  0  28  310  128  410
## 5694 NP_001349068.1 XP_021327013.1  50.000  258 129  0  58  315   74  331
## 5695 NP_001349068.1 XP_021327013.1  49.219  256 130  0  60  315  104  359
## 5696 NP_001349068.1 XP_021327013.1  48.649  259 132  1  58  315   45  303
## 5697 NP_001349068.1 XP_021327013.1  47.234  235 124  0  81  315   41  275
## 5698 NP_001349068.1 XP_021330522.1  50.000  268 134  0  48  315  120  387
## 5699 NP_001349068.1 XP_021330522.1  47.703  283 148  0  28  310  128  410
## 5700 NP_001349068.1 XP_021330522.1  50.000  258 129  0  58  315   74  331
## 5701 NP_001349068.1 XP_021330522.1  49.219  256 130  0  60  315  104  359
## 5702 NP_001349068.1 XP_021330522.1  48.649  259 132  1  58  315   45  303
## 5703 NP_001349068.1 XP_021330522.1  47.234  235 124  0  81  315   41  275
## 5704 NP_001349068.1 XP_021330519.1  50.000  268 134  0  48  315  120  387
## 5705 NP_001349068.1 XP_021330519.1  47.703  283 148  0  28  310  128  410
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## 5706 NP_001349068.1 XP_021330519.1  50.000  258 129  0  58  315   74  331
## 5707 NP_001349068.1 XP_021330519.1  49.219  256 130  0  60  315  104  359
## 5708 NP_001349068.1 XP_021330519.1  48.649  259 132  1  58  315   45  303
## 5709 NP_001349068.1 XP_021330519.1  47.234  235 124  0  81  315   41  275
## 5710 NP_001349068.1 XP_021330517.1  50.000  268 134  0  48  315  120  387
## 5711 NP_001349068.1 XP_021330517.1  47.703  283 148  0  28  310  128  410
## 5712 NP_001349068.1 XP_021330517.1  50.000  258 129  0  58  315   74  331
## 5713 NP_001349068.1 XP_021330517.1  49.219  256 130  0  60  315  104  359
## 5714 NP_001349068.1 XP_021330517.1  48.649  259 132  1  58  315   45  303
## 5715 NP_001349068.1 XP_021330517.1  47.234  235 124  0  81  315   41  275
## 5716 NP_001349068.1 XP_021330516.1  50.000  268 134  0  48  315  120  387
## 5717 NP_001349068.1 XP_021330516.1  47.703  283 148  0  28  310  128  410
## 5718 NP_001349068.1 XP_021330516.1  50.000  258 129  0  58  315   74  331
## 5719 NP_001349068.1 XP_021330516.1  49.219  256 130  0  60  315  104  359
## 5720 NP_001349068.1 XP_021330516.1  48.649  259 132  1  58  315   45  303
## 5721 NP_001349068.1 XP_021330516.1  47.234  235 124  0  81  315   41  275
## 5722 NP_001349068.1 XP_021330515.1  50.000  268 134  0  48  315  120  387
## 5723 NP_001349068.1 XP_021330515.1  47.703  283 148  0  28  310  128  410
## 5724 NP_001349068.1 XP_021330515.1  50.000  258 129  0  58  315   74  331
## 5725 NP_001349068.1 XP_021330515.1  49.219  256 130  0  60  315  104  359
## 5726 NP_001349068.1 XP_021330515.1  48.649  259 132  1  58  315   45  303
## 5727 NP_001349068.1 XP_021330515.1  47.234  235 124  0  81  315   41  275
## 5728 NP_001349068.1 XP_021330514.1  50.000  268 134  0  48  315  120  387
## 5729 NP_001349068.1 XP_021330514.1  47.703  283 148  0  28  310  128  410
## 5730 NP_001349068.1 XP_021330514.1  50.000  258 129  0  58  315   74  331
## 5731 NP_001349068.1 XP_021330514.1  49.219  256 130  0  60  315  104  359
## 5732 NP_001349068.1 XP_021330514.1  48.649  259 132  1  58  315   45  303
## 5733 NP_001349068.1 XP_021330514.1  47.234  235 124  0  81  315   41  275
## 5734 NP_001349068.1 XP_017211227.1  48.485  297 148  3  50  341   52  348
## 5735 NP_001349068.1 XP_021330521.1  50.000  268 134  0  48  315  120  387
## 5736 NP_001349068.1 XP_021330521.1  47.703  283 148  0  28  310  128  410
## 5737 NP_001349068.1 XP_021330521.1  50.000  258 129  0  58  315   74  331
## 5738 NP_001349068.1 XP_021330521.1  49.219  256 130  0  60  315  104  359
## 5739 NP_001349068.1 XP_021330521.1  48.649  259 132  1  58  315   45  303
## 5740 NP_001349068.1 XP_021330521.1  47.234  235 124  0  81  315   41  275
## 5741 NP_001349068.1 XP_021330520.1  50.000  268 134  0  48  315  120  387
## 5742 NP_001349068.1 XP_021330520.1  47.703  283 148  0  28  310  128  410
## 5743 NP_001349068.1 XP_021330520.1  50.000  258 129  0  58  315   74  331
## 5744 NP_001349068.1 XP_021330520.1  49.219  256 130  0  60  315  104  359
## 5745 NP_001349068.1 XP_021330520.1  48.649  259 132  1  58  315   45  303
## 5746 NP_001349068.1 XP_021330520.1  47.234  235 124  0  81  315   41  275
## 5747 NP_001349068.1 XP_021330518.1  50.000  268 134  0  48  315  120  387
## 5748 NP_001349068.1 XP_021330518.1  47.703  283 148  0  28  310  128  410
## 5749 NP_001349068.1 XP_021330518.1  50.000  258 129  0  58  315   74  331
## 5750 NP_001349068.1 XP_021330518.1  49.219  256 130  0  60  315  104  359
## 5751 NP_001349068.1 XP_021330518.1  48.649  259 132  1  58  315   45  303
## 5752 NP_001349068.1 XP_021330518.1  47.234  235 124  0  81  315   41  275
## 5753 NP_001349068.1 XP_021327003.1  55.039  258 116  0  58  315  266  523
## 5754 NP_001349068.1 XP_021327003.1  55.212  259 116  0  58  316  574  832
## 5755 NP_001349068.1 XP_021327003.1  53.488  258 120  0  58  315  518  775
## 5756 NP_001349068.1 XP_021327003.1  52.256  266 127  0  50  315  174  439
## 5757 NP_001349068.1 XP_021327003.1  51.880  266 128  0  50  315  650  915
## 5758 NP_001349068.1 XP_021327003.1  53.488  258 120  0  58  315  238  495
## 5759 NP_001349068.1 XP_021327003.1  45.317  331 160  4   6  315  137  467
```

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## 5760 NP_001349068.1 XP_021327003.1  52.326  258 123  0  58  315  126  383
## 5761 NP_001349068.1 XP_021327003.1  53.125  256 120  0  58  313  630  885
## 5762 NP_001349068.1 XP_021327003.1  48.951  286 118  1  58  315  994 1279
## 5763 NP_001349068.1 XP_021327003.1  52.713  258 122  0  58  315  742  999
## 5764 NP_001349068.1 XP_021327003.1  50.388  258 128  0  58  315  350  607
## 5765 NP_001349068.1 XP_021327003.1  51.938  258 124  0  58  315  770 1027
## 5766 NP_001349068.1 XP_021327003.1  50.775  258 127  0  58  315  882 1139
## 5767 NP_001349068.1 XP_021327003.1  51.163  258 126  0  58  315  854 1111
## 5768 NP_001349068.1 XP_021327003.1  51.562  256 124  0  58  313  378  633
## 5769 NP_001349068.1 XP_021327003.1  52.734  256 121  0  60  315 1164 1419
## 5770 NP_001349068.1 XP_021327003.1  48.339  271 140  0  49  319  425  695
## 5771 NP_001349068.1 XP_021327003.1  51.953  256 123  0  60  315 1108 1363
## 5772 NP_001349068.1 XP_021327003.1  51.172  256 125  0  60  315  324  579
## 5773 NP_001349068.1 XP_021327003.1  51.953  256 123  0  58  313  406  661
## 5774 NP_001349068.1 XP_021327003.1  49.438  267 135  0  49  315  817 1083
## 5775 NP_001349068.1 XP_021327003.1  52.326  258 123  0  58  315  910 1167
## 5776 NP_001349068.1 XP_021327003.1  51.550  258 125  0  58  315  490  747
## 5777 NP_001349068.1 XP_021327003.1  51.351  259 126  0  58  316  714  972
## 5778 NP_001349068.1 XP_021327003.1  48.540  274 140  1  58  330  462  735
## 5779 NP_001349068.1 XP_021327003.1  51.163  258 126  0  58  315   98  355
## 5780 NP_001349068.1 XP_021327003.1  50.000  258 129  0  58  315 1078 1335
## 5781 NP_001349068.1 XP_021327003.1  50.781  256 126  0  58  313  798 1053
## 5782 NP_001349068.1 XP_021327003.1  48.837  258 132  0  58  315  938 1195
## 5783 NP_001349068.1 XP_021327003.1  49.612  258 130  0  58  315 1134 1391
## 5784 NP_001349068.1 XP_021327003.1  48.638  257 132  0  60  316  968 1224
## 5785 NP_001349068.1 XP_021327003.1  51.948  231 111  0  60  290 1192 1422
## 5786 NP_001349068.1 XP_021327003.1  46.043  278 149  1  39  315   50  327
## 5787 NP_001349068.1 XP_021327003.1  48.529  204 105  0  58  261 1218 1421
## 5788 NP_001349068.1 XP_021327003.1  46.203  158  85  0  49  206 1265 1422
## 5789 NP_001349068.1 XP_021330542.1  55.039  258 116  0  58  315  266  523
## 5790 NP_001349068.1 XP_021330542.1  55.212  259 116  0  58  316  574  832
## 5791 NP_001349068.1 XP_021330542.1  53.488  258 120  0  58  315  518  775
## 5792 NP_001349068.1 XP_021330542.1  52.256  266 127  0  50  315  174  439
## 5793 NP_001349068.1 XP_021330542.1  51.880  266 128  0  50  315  650  915
## 5794 NP_001349068.1 XP_021330542.1  53.488  258 120  0  58  315  238  495
## 5795 NP_001349068.1 XP_021330542.1  45.317  331 160  4   6  315  137  467
## 5796 NP_001349068.1 XP_021330542.1  52.326  258 123  0  58  315  126  383
## 5797 NP_001349068.1 XP_021330542.1  53.125  256 120  0  58  313  630  885
## 5798 NP_001349068.1 XP_021330542.1  48.951  286 118  1  58  315  994 1279
## 5799 NP_001349068.1 XP_021330542.1  52.713  258 122  0  58  315  742  999
## 5800 NP_001349068.1 XP_021330542.1  50.388  258 128  0  58  315  350  607
## 5801 NP_001349068.1 XP_021330542.1  51.938  258 124  0  58  315  770 1027
## 5802 NP_001349068.1 XP_021330542.1  50.775  258 127  0  58  315  882 1139
## 5803 NP_001349068.1 XP_021330542.1  51.163  258 126  0  58  315  854 1111
## 5804 NP_001349068.1 XP_021330542.1  51.562  256 124  0  58  313  378  633
## 5805 NP_001349068.1 XP_021330542.1  52.734  256 121  0  60  315 1164 1419
## 5806 NP_001349068.1 XP_021330542.1  48.339  271 140  0  49  319  425  695
## 5807 NP_001349068.1 XP_021330542.1  51.953  256 123  0  60  315 1108 1363
## 5808 NP_001349068.1 XP_021330542.1  51.172  256 125  0  60  315  324  579
## 5809 NP_001349068.1 XP_021330542.1  51.953  256 123  0  58  313  406  661
## 5810 NP_001349068.1 XP_021330542.1  49.438  267 135  0  49  315  817 1083
## 5811 NP_001349068.1 XP_021330542.1  52.326  258 123  0  58  315  910 1167
## 5812 NP_001349068.1 XP_021330542.1  51.550  258 125  0  58  315  490  747
## 5813 NP_001349068.1 XP_021330542.1  51.351  259 126  0  58  316  714  972
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## 5814 NP_001349068.1 XP_021330542.1  48.540  274 140  1  58  330  462  735
## 5815 NP_001349068.1 XP_021330542.1  51.163  258 126  0  58  315   98  355
## 5816 NP_001349068.1 XP_021330542.1  50.000  258 129  0  58  315 1078 1335
## 5817 NP_001349068.1 XP_021330542.1  50.781  256 126  0  58  313  798 1053
## 5818 NP_001349068.1 XP_021330542.1  48.837  258 132  0  58  315  938 1195
## 5819 NP_001349068.1 XP_021330542.1  49.612  258 130  0  58  315 1134 1391
## 5820 NP_001349068.1 XP_021330542.1  48.638  257 132  0  60  316  968 1224
## 5821 NP_001349068.1 XP_021330542.1  51.948  231 111  0  60  290 1192 1422
## 5822 NP_001349068.1 XP_021330542.1  46.043  278 149  1  39  315   50  327
## 5823 NP_001349068.1 XP_021330542.1  48.529  204 105  0  58  261 1218 1421
## 5824 NP_001349068.1 XP_021330542.1  46.203  158  85  0  49  206 1265 1422
## 5825 NP_001349068.1 XP_017211012.2  53.668  259 120  0  58  316  117  375
## 5826 NP_001349068.1 XP_017211012.2  52.326  258 123  0  58  315  621  878
## 5827 NP_001349068.1 XP_017211012.2  52.326  258 123  0  58  315  369  626
## 5828 NP_001349068.1 XP_017211012.2  52.734  256 121  0  60  315  651  906
## 5829 NP_001349068.1 XP_017211012.2  49.807  259 130  0  58  316  565  823
## 5830 NP_001349068.1 XP_017211012.2  46.205  303 155  2  21  315  492  794
## 5831 NP_001349068.1 XP_017211012.2  52.326  258 123  0  58  315  341  598
## 5832 NP_001349068.1 XP_017211012.2  51.938  258 124  0  58  315  173  430
## 5833 NP_001349068.1 XP_017211012.2  52.326  258 123  0  58  315  593  850
## 5834 NP_001349068.1 XP_017211012.2  52.713  258 122  0  58  315  257  514
## 5835 NP_001349068.1 XP_017211012.2  49.064  267 136  0  50  316   81  347
## 5836 NP_001349068.1 XP_017211012.2  50.775  258 127  0  58  315  313  570
## 5837 NP_001349068.1 XP_017211012.2  50.579  259 128  0  58  316  425  683
## 5838 NP_001349068.1 XP_017211012.2  50.775  258 127  0  58  315  229  486
## 5839 NP_001349068.1 XP_017211012.2  49.219  256 130  0  60  315  455  710
## 5840 NP_001349068.1 XP_017211012.2  49.035  259 132  0  58  316  509  767
## 5841 NP_001349068.1 XP_017211012.2  49.612  258 130  0  58  315  481  738
## 5842 NP_001349068.1 XP_017211012.2  50.781  256 126  0  60  315  203  458
## 5843 NP_001349068.1 XP_017211012.2  48.837  258 132  0  58  315 1009 1266
## 5844 NP_001349068.1 XP_017211012.2  47.183  284 126  1  60  319  707  990
## 5845 NP_001349068.1 XP_017211012.2  46.403  278 149  0  38  315 1017 1294
## 5846 NP_001349068.1 XP_017211012.2  44.127  315 171  3  21  330  884 1198
## 5847 NP_001349068.1 XP_017211012.2  50.558  269 132  1  51  318   53  321
## 5848 NP_001349068.1 XP_017211012.2  48.062  258 134  0  58  315  953 1210
## 5849 NP_001349068.1 XP_017211012.2  47.566  267 136  1  49  315  752 1014
## 5850 NP_001349068.1 XP_017211012.2  49.200  250 127  0  58  307  677  926
## 5851 NP_001349068.1 XP_017211012.2  48.473  262 135  0  58  319 1065 1326
## 5852 NP_001349068.1 XP_017211012.2  48.221  253 131  0  58  310  981 1233
## 5853 NP_001349068.1 XP_017211012.2  42.258  310 127  2  58  315  845 1154
## 5854 NP_001349068.1 XP_017211012.2  48.963  241 122  1  91  330   66  306
## 5855 NP_001349068.1 XP_021331400.1  51.625  277 133  1  58  333 1216 1492
## 5856 NP_001349068.1 XP_021331400.1  53.125  256 120  0  60  315  148  403
## 5857 NP_001349068.1 XP_021331400.1  50.542  277 136  1  58  333  174  450
## 5858 NP_001349068.1 XP_021331400.1  45.875  303 163  1  28  329   60  362
## 5859 NP_001349068.1 XP_021331400.1  53.053  262 123  0  58  319  594  855
## 5860 NP_001349068.1 XP_021331400.1  52.290  262 125  0  58  319  202  463
## 5861 NP_001349068.1 XP_021331400.1  47.973  296 147  2  45  333  631  926
## 5862 NP_001349068.1 XP_021331400.1  51.938  258 124  0  58  315  566  823
## 5863 NP_001349068.1 XP_021331400.1  52.344  256 122  0  58  313  230  485
## 5864 NP_001349068.1 XP_021331400.1  52.964  253 119  0  58  310  622  874
## 5865 NP_001349068.1 XP_021331400.1  52.713  258 122  0  58  315  538  795
## 5866 NP_001349068.1 XP_021331400.1  46.326  313 154  3  21  319 1137 1449
## 5867 NP_001349068.1 XP_021331400.1  52.326  258 123  0  58  315 1272 1529
```

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## 5868 NP_001349068.1 XP_021331400.1  52.326  258 123  0  58  315 1244 1501
## 5869 NP_001349068.1 XP_021331400.1  53.053  262 123  0  58  319  902 1163
## 5870 NP_001349068.1 XP_021331400.1  46.602  309 136  2  50  329  278  586
## 5871 NP_001349068.1 XP_021331400.1  51.550  258 125  0  58  315  510  767
## 5872 NP_001349068.1 XP_021331400.1  52.713  258 122  0  58  315  846 1103
## 5873 NP_001349068.1 XP_021331400.1  47.552  286 149  1  46  330  414  699
## 5874 NP_001349068.1 XP_021331400.1  50.388  258 128  0  58  315 1468 1725
## 5875 NP_001349068.1 XP_021331400.1  50.763  262 129  0  58  319  734  995
## 5876 NP_001349068.1 XP_021331400.1  50.965  259 127  0  58  316 1300 1558
## 5877 NP_001349068.1 XP_021331400.1  51.550  258 125  0  58  315  818 1075
## 5878 NP_001349068.1 XP_021331400.1  52.157  255 122  0  61  315  877 1131
## 5879 NP_001349068.1 XP_021331400.1  44.295  298 165  1  19  315   22  319
## 5880 NP_001349068.1 XP_021331400.1  46.302  311 132  2  58  333 1126 1436
## 5881 NP_001349068.1 XP_021331400.1  53.125  256 120  0  58  313  370  625
## 5882 NP_001349068.1 XP_021331400.1  48.736  277 141  1  58  333  790 1066
## 5883 NP_001349068.1 XP_021331400.1  48.029  279 139  1  44  316  238  516
## 5884 NP_001349068.1 XP_021331400.1  49.643  280 134  2  58  330 1014 1293
## 5885 NP_001349068.1 XP_021331400.1  46.205  303 134  2  58  331  678  980
## 5886 NP_001349068.1 XP_021331400.1  50.388  258 128  0  58  315 1328 1585
## 5887 NP_001349068.1 XP_021331400.1  49.804  255 128  0  61  315  485  739
## 5888 NP_001349068.1 XP_021331400.1  51.163  258 126  0  58  315 1440 1697
## 5889 NP_001349068.1 XP_021331400.1  48.837  258 132  0  58  315  342  599
## 5890 NP_001349068.1 XP_021331400.1  48.718  273 134  1  49  315  921 1193
## 5891 NP_001349068.1 XP_021331400.1  47.674  258 135  0  58  315 1412 1669
## 5892 NP_001349068.1 XP_021331400.1  46.899  258 137  0  58  315 1384 1641
## 5893 NP_001349068.1 XP_021331400.1  50.667  150  74  0  58  207 1608 1757
## 5894 NP_001349068.1 XP_021331158.1  51.737  259 125  0  58  316   32  290
## 5895 NP_001349068.1 XP_021331158.1  49.826  287 144  0  29  315  115  401
## 5896 NP_001349068.1 XP_021331158.1  48.601  286 119  1  58  315  200  485
## 5897 NP_001349068.1 XP_021331158.1  51.163  258 126  0  58  315   88  345
## 5898 NP_001349068.1 XP_021331158.1  51.351  259 125  1  58  316    5  262
## 5899 NP_001349068.1 XP_021331158.1  50.388  258 128  0  58  315   60  317
## 5900 NP_001349068.1 XP_021331158.1  51.004  249 120  2  82  329    1  248
## 5901 NP_001349068.1 XP_021326773.1  52.326  258 123  0  58  315  133  390
## 5902 NP_001349068.1 XP_021326773.1  52.326  258 123  0  58  315   21  278
## 5903 NP_001349068.1 XP_021326773.1  52.941  255 120  0  58  312  217  471
## 5904 NP_001349068.1 XP_021326773.1  51.953  256 123  0  60  315  107  362
## 5905 NP_001349068.1 XP_021326773.1  51.163  258 126  0  58  315   77  334
## 5906 NP_001349068.1 XP_021326773.1  51.163  258 126  0  58  315   49  306
## 5907 NP_001349068.1 XP_021326773.1  50.391  256 127  0  60  315  191  446
## 5908 NP_001349068.1 XP_021326773.1  50.806  248 122  0  68  315    3  250
## 5909 NP_001349068.1 XP_021326773.1  51.802  222 107  0  94  315    1  222
## 5910 NP_001349068.1 XP_021331338.1  50.923  271 133  0  46  316  385  655
## 5911 NP_001349068.1 XP_021331338.1  50.181  277 137  1  58  333  313  589
## 5912 NP_001349068.1 XP_021331338.1  51.550  258 125  0  58  315  145  402
## 5913 NP_001349068.1 XP_021331338.1  51.938  258 124  0  58  315  229  486
## 5914 NP_001349068.1 XP_021331338.1  51.351  259 124  2  58  315  285  542
## 5915 NP_001349068.1 XP_021331338.1  50.000  258 129  0  58  315  369  626
## 5916 NP_001349068.1 XP_021331338.1  51.163  258 126  0  58  315   89  346
## 5917 NP_001349068.1 XP_021331338.1  49.097  277 140  1  58  333  201  477
## 5918 NP_001349068.1 XP_021331338.1  51.562  256 124  0  58  313  173  428
## 5919 NP_001349068.1 XP_021331338.1  50.775  258 127  0  58  315  117  374
## 5920 NP_001349068.1 XP_021331338.1  49.225  258 131  0  58  315  257  514
## 5921 NP_001349068.1 XP_021331338.1  49.012  253 129  0  63  315   66  318
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## 5922 NP_001349068.1 XP_021331338.1  44.840  281 149  2  40  315  408  687
## 5923 NP_001349068.1 XP_021331338.1  44.144  111  56  2  49  158  584  689
## 5924 NP_001349068.1 XP_017211225.1  49.451  273 132  1  50  316   81  353
## 5925 NP_001349068.1 XP_017211225.1  45.246  305 156  3  19  316   25  325
## 5926 NP_001349068.1 XP_017211225.1  49.145  234 113  1  58  285  145  378
## 5927 NP_001349068.1 XP_017211225.1  50.661  227 112  0  93  319   68  294
## 5928 NP_001349068.1 XP_021327156.1  50.181  277 137  1  58  333   79  355
## 5929 NP_001349068.1 XP_021327156.1  51.163  258 126  0  58  315  135  392
## 5930 NP_001349068.1 XP_021327156.1  51.938  258 124  0  58  315  163  420
## 5931 NP_001349068.1 XP_021327156.1  50.388  258 128  0  58  315  219  476
## 5932 NP_001349068.1 XP_021327156.1  48.679  265 136  0  49  313  182  446
## 5933 NP_001349068.1 XP_021327156.1  50.855  234 115  0  58  291  247  480
## 5934 NP_001349068.1 XP_021327156.1  48.469  196 101  0 120  315   57  252
## 5935 NP_001349068.1 XP_021327156.1  51.748  143  69  0 171  313   52  194
## 5936 NP_001349068.1 XP_021327156.1  44.643   56  31  0 261  316   58  113
## 5937 NP_001349068.1 XP_021331020.1  50.526  285 139  1  33  315  230  514
## 5938 NP_001349068.1 XP_021331020.1  53.817  262 121  0  58  319 4000 4261
## 5939 NP_001349068.1 XP_021331020.1  55.039  258 116  0  58  315 1490 1747
## 5940 NP_001349068.1 XP_021331020.1  54.651  258 117  0  58  315 1266 1523
## 5941 NP_001349068.1 XP_021331020.1  54.651  258 117  0  58  315 1350 1607
## 5942 NP_001349068.1 XP_021331020.1  52.364  275 128  2  58  329 3914 4188
## 5943 NP_001349068.1 XP_021331020.1  53.462  260 119  1  58  315 3970 4229
## 5944 NP_001349068.1 XP_021331020.1  50.903  277 135  1  58  333  341  617
## 5945 NP_001349068.1 XP_021331020.1  54.264  258 118  0  58  315  397  654
## 5946 NP_001349068.1 XP_021331020.1  52.713  258 122  0  58  315  313  570
## 5947 NP_001349068.1 XP_021331020.1  53.101  258 121  0  58  315 3047 3304
## 5948 NP_001349068.1 XP_021331020.1  49.827  289 143  1  33  319 3300 3588
## 5949 NP_001349068.1 XP_021331020.1  53.488  258 120  0  58  315 2851 3108
## 5950 NP_001349068.1 XP_021331020.1  52.874  261 123  0  58  318 2683 2943
## 5951 NP_001349068.1 XP_021331020.1  50.730  274 134  1  58  330  229  502
## 5952 NP_001349068.1 XP_021331020.1  52.713  258 122  0  58  315 3299 3556
## 5953 NP_001349068.1 XP_021331020.1  51.311  267 130  0  49  315 2646 2912
## 5954 NP_001349068.1 XP_021331020.1  53.053  262 123  0  58  319 2543 2804
## 5955 NP_001349068.1 XP_021331020.1  51.504  266 129  0  50  315 2759 3024
## 5956 NP_001349068.1 XP_021331020.1  52.326  258 123  0  58  315  481  738
## 5957 NP_001349068.1 XP_021331020.1  53.101  258 121  0  58  315 3243 3500
## 5958 NP_001349068.1 XP_021331020.1  52.672  262 124  0  58  319 3103 3364
## 5959 NP_001349068.1 XP_021331020.1  52.713  258 122  0  58  315  453  710
## 5960 NP_001349068.1 XP_021331020.1  52.326  258 123  0  58  315 2823 3080
## 5961 NP_001349068.1 XP_021331020.1  52.713  258 122  0  58  315 1182 1439
## 5962 NP_001349068.1 XP_021331020.1  51.550  258 125  0  58  315 5088 5345
## 5963 NP_001349068.1 XP_021331020.1  52.713  258 122  0  58  315 1462 1719
## 5964 NP_001349068.1 XP_021331020.1  53.516  256 119  0  58  313 3131 3386
## 5965 NP_001349068.1 XP_021331020.1  53.488  258 120  0  58  315  425  682
## 5966 NP_001349068.1 XP_021331020.1  52.713  258 122  0  58  315 2963 3220
## 5967 NP_001349068.1 XP_021331020.1  53.101  258 121  0  58  315 3187 3444
## 5968 NP_001349068.1 XP_021331020.1  54.054  259 119  0  58  316 3159 3417
## 5969 NP_001349068.1 XP_021331020.1  52.326  258 123  0  58  315 1406 1663
## 5970 NP_001349068.1 XP_021331020.1  51.128  266 130  0  50  315  529  794
## 5971 NP_001349068.1 XP_021331020.1  51.550  258 125  0  58  315 2347 2604
## 5972 NP_001349068.1 XP_021331020.1  51.527  262 127  0  58  319 3019 3280
## 5973 NP_001349068.1 XP_021331020.1  51.938  258 124  0  58  315 2487 2744
## 5974 NP_001349068.1 XP_021331020.1  48.443  289 148  1  46  333 3259 3547
## 5975 NP_001349068.1 XP_021331020.1  51.550  258 125  0  58  315 2907 3164
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## 5976 NP_001349068.1 XP_021331020.1  50.730  274 134  1  58  330 1434 1707
## 5977 NP_001349068.1 XP_021331020.1  51.953  256 123  0  58  313 5172 5427
## 5978 NP_001349068.1 XP_021331020.1  52.326  258 123  0  58  315 5004 5261
## 5979 NP_001349068.1 XP_021331020.1  52.326  258 123  0  58  315 2571 2828
## 5980 NP_001349068.1 XP_021331020.1  51.550  258 125  0  58  315 2403 2660
## 5981 NP_001349068.1 XP_021331020.1  51.163  258 126  0  58  315 2991 3248
## 5982 NP_001349068.1 XP_021331020.1  51.938  258 124  0  58  315 2375 2632
## 5983 NP_001349068.1 XP_021331020.1  48.201  278 144  0  38  315 1554 1831
## 5984 NP_001349068.1 XP_021331020.1  47.059  289 153  0  27  315 2596 2884
## 5985 NP_001349068.1 XP_021331020.1  52.124  259 124  0  58  316 4948 5206
## 5986 NP_001349068.1 XP_021331020.1  48.601  286 119  1  58  315 4224 4509
## 5987 NP_001349068.1 XP_021331020.1  49.635  274 137  1  58  330 1238 1511
## 5988 NP_001349068.1 XP_021331020.1  51.550  258 125  0  58  315 1322 1579
## 5989 NP_001349068.1 XP_021331020.1  52.326  258 123  0  58  315  565  822
## 5990 NP_001349068.1 XP_021331020.1  46.358  302 133  2  58  330  117  418
## 5991 NP_001349068.1 XP_021331020.1  51.172  256 125  0  60  315 2937 3192
## 5992 NP_001349068.1 XP_021331020.1  50.187  267 133  0  49  315 1201 1467
## 5993 NP_001349068.1 XP_021331020.1  51.362  257 125  0  60  316 4058 4314
## 5994 NP_001349068.1 XP_021331020.1  51.163  258 126  0  58  315  173  430
## 5995 NP_001349068.1 XP_021331020.1  52.326  258 122  1  58  315 4613 4869
## 5996 NP_001349068.1 XP_021331020.1  52.326  258 123  0  58  315  621  878
## 5997 NP_001349068.1 XP_021331020.1  48.736  277 141  1  58  333 3690 3966
## 5998 NP_001349068.1 XP_021331020.1  51.550  258 125  0  58  315 2515 2772
## 5999 NP_001349068.1 XP_021331020.1  51.550  258 125  0  58  315 4892 5149
## 6000 NP_001349068.1 XP_021331020.1  50.775  258 127  0  58  315 2795 3052
## 6001 NP_001349068.1 XP_021331020.1  50.000  258 129  0  58  315  201  458
## 6002 NP_001349068.1 XP_021331020.1  50.391  256 127  0  58  313 1518 1773
## 6003 NP_001349068.1 XP_021331020.1  50.181  277 137  1  58  333 5060 5336
## 6004 NP_001349068.1 XP_021331020.1  51.351  259 126  0  58  316 5116 5374
## 6005 NP_001349068.1 XP_021331020.1  51.550  258 125  0  58  315  509  766
## 6006 NP_001349068.1 XP_021331020.1  50.388  258 128  0  58  315 5032 5289
## 6007 NP_001349068.1 XP_021331020.1  51.172  256 125  0  60  315 4922 5177
## 6008 NP_001349068.1 XP_021331020.1  48.507  268 138  0  48  315 2253 2520
## 6009 NP_001349068.1 XP_021331020.1  50.388  258 128  0  58  315 2711 2968
## 6010 NP_001349068.1 XP_021331020.1  48.014  277 143  1  58  333 2151 2427
## 6011 NP_001349068.1 XP_021331020.1  50.000  256 128  0  60  315 2321 2576
## 6012 NP_001349068.1 XP_021331020.1  48.611  288 120  2  56  315 4778 5065
## 6013 NP_001349068.1 XP_021331020.1  50.388  258 128  0  58  315 2123 2380
## 6014 NP_001349068.1 XP_021331020.1  49.627  268 135  0  48  315 2281 2548
## 6015 NP_001349068.1 XP_021331020.1  45.645  287 156  0  29  315 5255 5541
## 6016 NP_001349068.1 XP_021331020.1  49.117  283 118  2  58  315 4504 4785
## 6017 NP_001349068.1 XP_021331020.1  51.145  262 123  2  58  315  649  909
## 6018 NP_001349068.1 XP_021331020.1  50.775  258 127  0  58  315  593  850
## 6019 NP_001349068.1 XP_021331020.1  48.763  283 144  1  49  330 2422 2704
## 6020 NP_001349068.1 XP_021331020.1  50.775  258 127  0  58  315 2459 2716
## 6021 NP_001349068.1 XP_021331020.1  52.756  254 119  1  58  311 3355 3607
## 6022 NP_001349068.1 XP_021331020.1  51.562  256 124  0  58  313 5144 5399
## 6023 NP_001349068.1 XP_021331020.1  50.000  266 133  0  50  315 2199 2464
## 6024 NP_001349068.1 XP_021331020.1  50.781  256 126  0  58  313 5200 5455
## 6025 NP_001349068.1 XP_021331020.1  50.775  258 127  0  58  315   33  290
## 6026 NP_001349068.1 XP_021331020.1  49.225  258 131  0  58  315 5228 5485
## 6027 NP_001349068.1 XP_021331020.1  47.872  282 146  1  50  330 2227 2508
## 6028 NP_001349068.1 XP_021331020.1  43.533  317 121  2  58  316  817 1133
## 6029 NP_001349068.1 XP_021331020.1  49.225  258 131  0  58  315 3718 3975
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## 6030 NP_001349068.1 XP_021331020.1  49.042  261 131  1  58  316 3746 4006
## 6031 NP_001349068.1 XP_021331020.1  47.203  286 123  1  58  315 4168 4453
## 6032 NP_001349068.1 XP_021331020.1  45.918  294 131  1  50  315 4104 4397
## 6033 NP_001349068.1 XP_021331020.1  43.161  329 166  3   6  313 4011 4339
## 6034 NP_001349068.1 XP_021331020.1  49.248  266 135  0  50  315 3598 3863
## 6035 NP_001349068.1 XP_021331020.1  49.807  259 128  2  58  315   89  346
## 6036 NP_001349068.1 XP_021331020.1  47.018  285 124  1  58  315 1099 1383
## 6037 NP_001349068.1 XP_021331020.1  45.230  283 155  0  29  311 5283 5565
## 6038 NP_001349068.1 XP_021331020.1  49.219  256 130  0  58  313 1546 1801
## 6039 NP_001349068.1 XP_021331020.1  45.361  291 158  1  29  319 3466 3755
## 6040 NP_001349068.1 XP_021331020.1  48.047  256 133  0  58  313 1630 1885
## 6041 NP_001349068.1 XP_021331020.1  44.755  286 141  1  48  316 2012 2297
## 6042 NP_001349068.1 XP_021331020.1  46.442  267 143  0  49  315 3653 3919
## 6043 NP_001349068.1 XP_021331020.1  47.368  266 140  0  50  315 1146 1411
## 6044 NP_001349068.1 XP_021331020.1  49.200  250 127  0  61  310 4283 4532
## 6045 NP_001349068.1 XP_021331020.1  43.750  304 143  2  58  333 3551 3854
## 6046 NP_001349068.1 XP_021331020.1  50.000  258 126  1  58  315 4308 4562
## 6047 NP_001349068.1 XP_021331020.1  47.287  258 136  0  58  315 2095 2352
## 6048 NP_001349068.1 XP_021331020.1  46.899  258 137  0  58  315    5  262
## 6049 NP_001349068.1 XP_021331020.1  43.492  315 149  2  29  315 1014 1327
## 6050 NP_001349068.1 XP_021331020.1  50.391  256 125  2  56  311  902 1155
## 6051 NP_001349068.1 XP_021331020.1  43.151  292 157  2  33  315 2033 2324
## 6052 NP_001349068.1 XP_021331020.1  43.682  277 155  1  58  333 1714 1990
## 6053 NP_001349068.1 XP_021331020.1  50.388  258 127  1  58  315 4753 5009
## 6054 NP_001349068.1 XP_021331020.1  47.566  267 140  0  49  315 4855 5121
## 6055 NP_001349068.1 XP_021331020.1  48.438  256 132  0  58  313 1658 1913
## 6056 NP_001349068.1 XP_021331020.1  46.094  256 138  0  58  313 1742 1997
## 6057 NP_001349068.1 XP_021331020.1  44.086  279 153  1  58  333 5340 5618
## 6058 NP_001349068.1 XP_021331020.1  46.512  258 138  0  58  315 3634 3891
## 6059 NP_001349068.1 XP_021331020.1  45.312  256 140  0  60  315 1772 2027
## 6060 NP_001349068.1 XP_021331020.1  43.956  273 136  1  58  313 1826 2098
## 6061 NP_001349068.1 XP_021331020.1  44.882  254 140  0  58  311 1798 2051
## 6062 NP_001349068.1 XP_021331020.1  43.191  257 146  0  58  314 5368 5624
## 6063 NP_001349068.1 XP_021326985.1  49.618  262 132  0  58  319  138  399
## 6064 NP_001349068.1 XP_021326985.1  52.157  255 122  0  58  312  194  448
## 6065 NP_001349068.1 XP_021326985.1  50.391  256 127  0  58  313  166  421
## 6066 NP_001349068.1 XP_021326985.1  52.174  253 121  0  61  313  113  365
## 6067 NP_001349068.1 XP_021326985.1  50.885  226 111  0  88  313  112  337
## 6068 NP_001349068.1 XP_021330513.1  49.618  262 132  0  58  319  138  399
## 6069 NP_001349068.1 XP_021330513.1  52.157  255 122  0  58  312  194  448
## 6070 NP_001349068.1 XP_021330513.1  50.391  256 127  0  58  313  166  421
## 6071 NP_001349068.1 XP_021330513.1  52.174  253 121  0  61  313  113  365
## 6072 NP_001349068.1 XP_021330513.1  50.885  226 111  0  88  313  112  337
## 6073 NP_001349068.1 NP_001120944.1  53.101  258 121  0  58  315   79  336
## 6074 NP_001349068.1 NP_001120944.1  51.562  256 124  0  58  313  107  362
## 6075 NP_001349068.1 NP_001120944.1  51.504  266 126  3  50  313   42  306
## 6076 NP_001349068.1 NP_001120944.1  47.909  263 137  0  49  311  126  388
## 6077 NP_001349068.1 NP_001120944.1  51.269  197  96  0 119  315   56  252
## 6078 NP_001349068.1 NP_001120944.1  48.980  147  75  0  58  204  247  393
## 6079 NP_001349068.1 XP_017211215.2  54.264  258 118  0  58  315  399  656
## 6080 NP_001349068.1 XP_017211215.2  53.876  258 119  0  58  315  455  712
## 6081 NP_001349068.1 XP_017211215.2  53.488  258 120  0  58  315  735  992
## 6082 NP_001349068.1 XP_017211215.2  54.264  258 118  0  58  315  595  852
## 6083 NP_001349068.1 XP_017211215.2  54.264  258 118  0  58  315  539  796
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## 6084 NP_001349068.1 XP_017211215.2  53.488  258 120  0  58  315  567  824
## 6085 NP_001349068.1 XP_017211215.2  48.264  288 149  0  28  315  649  936
## 6086 NP_001349068.1 XP_017211215.2  48.264  288 149  0  28  315  313  600
## 6087 NP_001349068.1 XP_017211215.2  54.264  258 118  0  58  315  483  740
## 6088 NP_001349068.1 XP_017211215.2  52.713  258 122  0  58  315  623  880
## 6089 NP_001349068.1 XP_017211215.2  52.326  258 123  0  58  315  287  544
## 6090 NP_001349068.1 XP_017211215.2  52.713  258 122  0  58  315  259  516
## 6091 NP_001349068.1 XP_017211215.2  53.077  260 120  1  58  315  145  404
## 6092 NP_001349068.1 XP_017211215.2  52.326  258 121  1  58  313    5  262
## 6093 NP_001349068.1 XP_017211215.2  49.231  260 130  1  58  315  229  488
## 6094 NP_001349068.1 XP_017211215.2  49.219  256 130  0  58  313  819 1074
## 6095 NP_001349068.1 XP_017211215.2  54.622  238 108  0  82  319    1  238
## 6096 NP_001349068.1 XP_017211215.2  47.490  259 136  0  58  316  791 1049
## 6097 NP_001349068.1 XP_021326475.1  46.154  299 149  2  18  315   10  297
## 6098 NP_001349068.1 XP_021326475.1  50.622  241 119  0  48  288   58  298
## 6099 NP_001349068.1 XP_021331199.1  52.399  271 129  0  45  315   76  346
## 6100 NP_001349068.1 XP_021331199.1  52.713  258 122  0  58  315  229  486
## 6101 NP_001349068.1 XP_021331199.1  54.264  258 118  0  58  315  397  654
## 6102 NP_001349068.1 XP_021331199.1  52.713  258 122  0  58  315  201  458
## 6103 NP_001349068.1 XP_021331199.1  54.264  258 118  0  58  315  341  598
## 6104 NP_001349068.1 XP_021331199.1  53.876  258 119  0  58  315  285  542
## 6105 NP_001349068.1 XP_021331199.1  50.936  267 131  0  49  315  164  430
## 6106 NP_001349068.1 XP_021331199.1  53.101  258 121  0  58  315  313  570
## 6107 NP_001349068.1 XP_021331199.1  49.147  293 142  2  45  330   14  306
## 6108 NP_001349068.1 XP_021331199.1  52.326  258 123  0  58  315  117  374
## 6109 NP_001349068.1 XP_021331199.1  52.326  258 123  0  58  315  145  402
## 6110 NP_001349068.1 XP_021331199.1  52.326  258 123  0  58  315    5  262
## 6111 NP_001349068.1 XP_021331199.1  51.938  258 124  0  58  315   61  318
## 6112 NP_001349068.1 XP_021331199.1  49.650  286 116  1  58  315  453  738
## 6113 NP_001349068.1 XP_021331199.1  51.550  258 125  0  58  315  369  626
## 6114 NP_001349068.1 XP_021331199.1  51.953  256 123  0  58  313  425  680
## 6115 NP_001349068.1 XP_021331199.1  50.579  259 127  1  58  316  705  962
## 6116 NP_001349068.1 XP_021331199.1  45.139  288 157  1  29  316  508  794
## 6117 NP_001349068.1 XP_021331199.1  49.618  262 130  2  50  311  725  984
## 6118 NP_001349068.1 XP_021331199.1  51.709  234 113  0  82  315    1  234
## 6119 NP_001349068.1 XP_021331199.1  48.828  256 130  1  58  313  816 1070
## 6120 NP_001349068.1 XP_021331199.1  45.415  229 124  1  29  257  843 1070
## 6121 NP_001349068.1 XP_021331199.1  53.012  166  77  1 166  330    1  166
## 6122 NP_001349068.1 XP_021331200.1  51.079  278 136  0  38  315  303  580
## 6123 NP_001349068.1 XP_021331200.1  52.434  267 127  0  49  315  230  496
## 6124 NP_001349068.1 XP_021331200.1  52.713  258 122  0  58  315  351  608
## 6125 NP_001349068.1 XP_021331200.1  50.181  277 132  1  45  315  248  524
## 6126 NP_001349068.1 XP_021331200.1  52.326  258 123  0  58  315  295  552
## 6127 NP_001349068.1 XP_021331200.1  50.775  258 127  0  58  315  211  468
## 6128 NP_001349068.1 XP_021331200.1  50.769  260 126  1  58  315  379  638
## 6129 NP_001349068.1 XP_021331200.1  52.124  259 124  0  58  316  717  975
## 6130 NP_001349068.1 XP_021331200.1  49.270  274 138  1  58  330  183  456
## 6131 NP_001349068.1 XP_021331200.1  50.000  268 134  0  48  315  791 1058
## 6132 NP_001349068.1 XP_021331200.1  49.064  267 136  0  49  315  118  384
## 6133 NP_001349068.1 XP_021331200.1  47.101  276 145  1  40  315  138  412
## 6134 NP_001349068.1 XP_021331200.1  49.306  288 116  2  58  315  519  806
## 6135 NP_001349068.1 XP_021331200.1  52.308  260 122  1  58  315  603  862
## 6136 NP_001349068.1 XP_021331200.1  46.853  286 124  1  58  315  745 1030
## 6137 NP_001349068.1 XP_021331200.1  49.609  256 129  0  60  315  101  356
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## 6138 NP_001349068.1 XP_021331200.1  50.388  258 128  0  58  315  661  918
## 6139 NP_001349068.1 XP_021331200.1  49.612  258 130  0  58  315  689  946
## 6140 NP_001349068.1 XP_021331200.1  50.215  233 116  0  58  290  829 1061
## 6141 NP_001349068.1 XP_021331200.1  43.836  292 159  1  24  315   42  328
## 6142 NP_001349068.1 XP_021331200.1  41.627  209 114  2 108  316   45  245
## 6143 NP_001349068.1 XP_017211133.2  51.321  265 129  0  49  313  247  511
## 6144 NP_001349068.1 XP_017211133.2  48.134  268 139  0  48  315  330  597
## 6145 NP_001349068.1 XP_017211133.2  51.172  256 125  0  60  315  230  485
## 6146 NP_001349068.1 XP_017211133.2  49.213  254 129  0  58  311  368  621
## 6147 NP_001349068.1 XP_017211133.2  49.438  267 135  0  49  315  163  429
## 6148 NP_001349068.1 XP_017211133.2  49.231  260 132  0  56  315  114  373
## 6149 NP_001349068.1 XP_017211133.2  50.192  261 130  0  56  316  282  542
## 6150 NP_001349068.1 XP_017211133.2  49.027  257 131  0  60  316  314  570
## 6151 NP_001349068.1 XP_017211133.2  48.872  266 136  0  50  315  192  457
## 6152 NP_001349068.1 XP_017211133.2  48.881  268 137  0  48  315   78  345
## 6153 NP_001349068.1 XP_017211133.2  48.846  260 133  0  56  315  142  401
## 6154 NP_001349068.1 XP_017211133.2  47.842  278 144  1  39  315   40  317
## 6155 NP_001349068.1 XP_017211133.2  44.565  276 153  0  58  333  396  671
## 6156 NP_001349068.1 XP_017211133.2  44.304  237 131  1  49  285  443  678
## 6157 NP_001349068.1 XP_017211133.2  50.000  142  71  0 175  316   65  206
## 6158 NP_001349068.1 XP_017211133.2  41.304   46  26  1 287  331   65  110
## 6159 NP_001349068.1 XP_021331033.1  53.876  258 119  0  58  315  204  461
## 6160 NP_001349068.1 XP_021331033.1  53.640  261 119  1  58  316  146  406
## 6161 NP_001349068.1 XP_021331033.1  53.101  258 121  0  58  315  176  433
## 6162 NP_001349068.1 XP_021331033.1  50.725  276 133  2  58  330    6  281
## 6163 NP_001349068.1 XP_021331033.1  51.351  259 126  0  58  316  232  490
## 6164 NP_001349068.1 XP_021331033.1  50.775  258 127  0  58  315  514  771
## 6165 NP_001349068.1 XP_021331033.1  50.385  260 127  1  58  315  260  519
## 6166 NP_001349068.1 XP_021331033.1  47.426  272 141  1  46  315  472  743
## 6167 NP_001349068.1 XP_021331033.1  52.321  237 111  1  81  315    1  237
## 6168 NP_001349068.1 XP_021331033.1  49.802  253 121  1  44  290  522  774
## 6169 NP_001349068.1 XP_021331067.1  52.549  255 121  0  58  312  121  375
## 6170 NP_001349068.1 XP_021331067.1  50.391  256 127  0  58  313   93  348
## 6171 NP_001349068.1 XP_021331067.1  46.622  296 156  2  19  313   26  320
## 6172 NP_001349068.1 XP_021331067.1  46.970  198 105  0 119  316   70  267
## 6173 NP_001349068.1 XP_021331163.1  51.938  258 124  0  58  315  116  373
## 6174 NP_001349068.1 XP_021331163.1  49.813  267 134  0  49  315   51  317
## 6175 NP_001349068.1 XP_021331163.1  53.101  258 121  0  58  315  564  821
## 6176 NP_001349068.1 XP_021331163.1  48.410  283 145  1  49  330   23  305
## 6177 NP_001349068.1 XP_021331163.1  52.713  258 122  0  58  315  592  849
## 6178 NP_001349068.1 XP_021331163.1  49.474  285 142  1  33  315  621  905
## 6179 NP_001349068.1 XP_021331163.1  49.270  274 138  1  58  330  144  417
## 6180 NP_001349068.1 XP_021331163.1  49.097  277 140  1  58  333  172  448
## 6181 NP_001349068.1 XP_021331163.1  53.101  258 121  0  58  315  676  933
## 6182 NP_001349068.1 XP_021331163.1  51.095  274 133  1  58  330  536  809
## 6183 NP_001349068.1 XP_021331163.1  47.297  296 149  2  45  333  601  896
## 6184 NP_001349068.1 XP_021331163.1  49.270  274 138  1  58  330    4  277
## 6185 NP_001349068.1 XP_021331163.1  51.938  258 124  0  58  315  508  765
## 6186 NP_001349068.1 XP_021331163.1  50.000  266 133  0  50  315  248  513
## 6187 NP_001349068.1 XP_021331163.1  51.351  259 126  0  58  316  480  738
## 6188 NP_001349068.1 XP_021331163.1  50.775  258 127  0  58  315  200  457
## 6189 NP_001349068.1 XP_021331163.1  49.813  267 134  0  49  315  275  541
## 6190 NP_001349068.1 XP_021331163.1  48.315  267 138  0  49  315   79  345
## 6191 NP_001349068.1 XP_021331163.1  45.819  299 155  2  42  333  430  728
```

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## 6192 NP_001349068.1 XP_021331163.1  49.438  267 135  0  49  315  359  625
## 6193 NP_001349068.1 XP_021331163.1  49.434  265 134  0  49  313  219  483
## 6194 NP_001349068.1 XP_021331163.1  49.813  267 134  0  49  315  415  681
## 6195 NP_001349068.1 XP_021331163.1  51.515  231 112  0  85  315    3  233
## 6196 NP_001349068.1 XP_021331163.1  45.936  283 126  1  58  313  732 1014
## 6197 NP_001349068.1 XP_021331163.1  46.332  259 112  1  58  289  760 1018
## 6198 NP_001349068.1 XP_021331163.1  51.961  204  98  0 112  315    2  205
## 6199 NP_001349068.1 XP_021331163.1  48.148   81  41  1 251  330    1   81
## 6200 NP_001349068.1 XP_021331163.1  46.032   63  33  1  60  122  958 1019
## 6201 NP_001349068.1 XP_017211168.1  50.373  268 131  2  50  315   52  319
## 6202 NP_001349068.1 XP_017211168.1  51.293  232 112  1  58  288   89  320
## 6203 NP_001349068.1 XP_017211168.1  44.245  278 146  4  70  342   49  322
## 6204 NP_001349068.1 XP_017211168.1  52.514  179  84  1  58  235  145  323
## 6205 NP_001349068.1 XP_021331159.1  49.813  267 134  0  50  316   81  347
## 6206 NP_001349068.1 XP_021331159.1  48.438  256 132  0  58  313  117  372
## 6207 NP_001349068.1 XP_021331159.1  42.475  299 169  2  18  316   24  319
## 6208 NP_001349068.1 XP_021331159.1  44.792  192 106  0  38  229  181  372
## 6209 NP_001349068.1 XP_017211166.1  51.953  256 123  0  58  313   89  344
## 6210 NP_001349068.1 XP_017211166.1  49.811  265 132  1  50  313   52  316
## 6211 NP_001349068.1 XP_017211166.1  46.473  241 129  0  46  286  105  345
## 6212 NP_001349068.1 XP_017211166.1  47.872  188  97  1 144  330   63  250
## 6213 NP_001349068.1 XP_021329615.1  50.000  268 134  0  48  315  120  387
## 6214 NP_001349068.1 XP_021329615.1  46.996  283 150  0  28  310  128  410
## 6215 NP_001349068.1 XP_021329615.1  48.828  256 131  0  60  315  104  359
## 6216 NP_001349068.1 XP_021329615.1  49.225  258 131  0  58  315   74  331
## 6217 NP_001349068.1 XP_021329615.1  47.287  258 136  0  59  316   47  304
## 6218 NP_001349068.1 XP_021329615.1  47.234  235 124  0  81  315   41  275
## 6219 NP_001349068.1 XP_021329615.1  42.500   40  23  0 276  315   40   79
## 6220 NP_001349068.1 XP_021331282.1  54.297  256 117  0  58  313  173  428
## 6221 NP_001349068.1 XP_021331282.1  55.078  256 115  0  58  313  313  568
## 6222 NP_001349068.1 XP_021331282.1  51.880  266 128  0  48  313  247  512
## 6223 NP_001349068.1 XP_021331282.1  51.562  256 124  0  58  313  117  372
## 6224 NP_001349068.1 XP_021331282.1  50.769  260 128  0  58  317  369  628
## 6225 NP_001349068.1 XP_021331282.1  48.039  306 145  3   9  313   24  316
## 6226 NP_001349068.1 XP_021331282.1  51.172  256 125  0  58  313  145  400
## 6227 NP_001349068.1 XP_021331282.1  43.218  317 151  2  46  333  189  505
## 6228 NP_001349068.1 XP_021331282.1  49.621  264 133  0  50  313   81  344
## 6229 NP_001349068.1 XP_021331282.1  49.500  200 101  0 116  315   63  262
## 6230 NP_001349068.1 NP_001116087.1  46.284  296 154  2  19  313   25  316
## 6231 NP_001349068.1 NP_001116087.1  50.758  264 130  0  50  313   81  344
## 6232 NP_001349068.1 NP_001116087.1  51.383  253 123  0  58  310  117  369
## 6233 NP_001349068.1 NP_001116087.1  44.574  258 116  1  58  288  145  402
## 6234 NP_001349068.1 XP_017210844.2  51.953  256 123  0  58  313   76  331
## 6235 NP_001349068.1 XP_017210844.2  50.373  268 133  0  48  315   10  277
## 6236 NP_001349068.1 XP_017210844.2  50.545  275 134  2  58  330  132  406
## 6237 NP_001349068.1 XP_017210844.2  53.629  248 115  0  68  315    2  249
## 6238 NP_001349068.1 XP_017210844.2  50.775  258 127  0  58  315   48  305
## 6239 NP_001349068.1 XP_017210844.2  51.575  254 122  1  60  312  162  415
## 6240 NP_001349068.1 XP_017210844.2  52.036  221 106  0  95  315    1  221
## 6241 NP_001349068.1 XP_017210844.2  52.261  199  94  1  59  256  217  415
## 6242 NP_001349068.1 XP_017210844.2  54.651  172  77  1  58  228  244  415
## 6243 NP_001349068.1 XP_017210844.2  47.333  150  78  1  60  208  274  423
## 6244 NP_001349068.1 XP_017210844.2  55.224   67  30  0  58  124  357  423
## 6245 NP_001349068.1 XP_017210844.2  43.056   72  40  1 263  333    1   72
```

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## 6246 NP_001349068.1 XP_021330829.1  52.174  253 121  0  63  315   19  271
## 6247 NP_001349068.1 XP_021330829.1  46.484  256 133  2  91  342   19  274
## 6248 NP_001349068.1 XP_021330829.1  49.438  178  90  0  58  235   98  275
## 6249 NP_001349068.1 XP_021330829.1  46.739  184  98  0 133  316    5  188
## 6250 NP_001349068.1 XP_021331198.1  51.636  275 132  1  60  333   32  306
## 6251 NP_001349068.1 XP_021331198.1  54.264  258 118  0  58  315  562  819
## 6252 NP_001349068.1 XP_021331198.1  53.101  258 121  0  58  315  114  371
## 6253 NP_001349068.1 XP_021331198.1  49.819  277 138  1  58  333   58  334
## 6254 NP_001349068.1 XP_021331198.1  52.326  258 123  0  58  315  310  567
## 6255 NP_001349068.1 XP_021331198.1  52.713  258 122  0  58  315   86  343
## 6256 NP_001349068.1 XP_021331198.1  52.896  259 122  0  58  316  142  400
## 6257 NP_001349068.1 XP_021331198.1  52.326  258 123  0  58  315  394  651
## 6258 NP_001349068.1 XP_021331198.1  50.936  267 131  0  49  315  469  735
## 6259 NP_001349068.1 XP_021331198.1  52.326  258 123  0  58  315  590  847
## 6260 NP_001349068.1 XP_021331198.1  52.713  258 122  0  58  315  534  791
## 6261 NP_001349068.1 XP_021331198.1  53.488  258 120  0  58  315  450  707
## 6262 NP_001349068.1 XP_021331198.1  53.101  258 121  0  58  315  618  875
## 6263 NP_001349068.1 XP_021331198.1  53.101  258 121  0  58  315  786 1043
## 6264 NP_001349068.1 XP_021331198.1  53.333  255 119  0  58  312  646  900
## 6265 NP_001349068.1 XP_021331198.1  51.938  258 124  0  58  315  814 1071
## 6266 NP_001349068.1 XP_021331198.1  52.326  258 123  0  58  315  506  763
## 6267 NP_001349068.1 XP_021331198.1  51.079  278 135  1  58  334  758 1035
## 6268 NP_001349068.1 XP_021331198.1  52.778  252 119  0  58  309  842 1093
## 6269 NP_001349068.1 XP_021331198.1  50.000  274 136  1  58  330  674  947
## 6270 NP_001349068.1 XP_021331198.1  51.163  258 126  0  58  315  366  623
## 6271 NP_001349068.1 XP_021331198.1  48.944  284 117  2  58  313  226  509
## 6272 NP_001349068.1 XP_021331198.1  50.579  259 128  0  57  315    1  259
## 6273 NP_001349068.1 XP_021331198.1  46.853  286 124  1  58  315  702  987
## 6274 NP_001349068.1 XP_021331198.1  47.902  286 121  1  58  315  198  483
## 6275 NP_001349068.1 XP_021331198.1  48.201  278 138  1  44  315  262  539
## 6276 NP_001349068.1 XP_021331198.1  49.798  247 123  1  88  333    4  250
## 6277 NP_001349068.1 XP_017210643.2  51.953  256 123  0  58  313   95  350
## 6278 NP_001349068.1 XP_017210643.2  51.172  256 125  0  58  313   67  322
## 6279 NP_001349068.1 XP_017210643.2  45.238  294 159  2  21  313    2  294
## 6280 NP_001349068.1 XP_017210643.2  46.914  243 129  0  58  300  123  365
## 6281 NP_001349068.1 XP_017211121.2  47.883  307 153  4  40  341   33  337
## 6282 NP_001349068.1 XP_021330462.1  51.765  255 123  0  60  314  143  397
## 6283 NP_001349068.1 XP_021330462.1  49.270  274 139  0  42  315   69  342
## 6284 NP_001349068.1 XP_021330462.1  52.344  256 122  0  60  315  115  370
## 6285 NP_001349068.1 XP_021330462.1  48.659  261 134  0  58  318  169  429
## 6286 NP_001349068.1 XP_021330462.1  45.965  285 126  1  60  316  227  511
## 6287 NP_001349068.1 XP_021330462.1  48.413  252 130  0  60  311  199  450
## 6288 NP_001349068.1 XP_021330462.1  40.909   44  26  0  46   89  493  536
## 6289 NP_001349068.1 XP_021330461.1  51.765  255 123  0  60  314  143  397
## 6290 NP_001349068.1 XP_021330461.1  49.270  274 139  0  42  315   69  342
## 6291 NP_001349068.1 XP_021330461.1  52.344  256 122  0  60  315  115  370
## 6292 NP_001349068.1 XP_021330461.1  48.659  261 134  0  58  318  169  429
## 6293 NP_001349068.1 XP_021330461.1  45.965  285 126  1  60  316  227  511
## 6294 NP_001349068.1 XP_021330461.1  48.413  252 130  0  60  311  199  450
## 6295 NP_001349068.1 XP_021330461.1  40.909   44  26  0  46   89  493  536
## 6296 NP_001349068.1 XP_021330460.1  51.765  255 123  0  60  314  143  397
## 6297 NP_001349068.1 XP_021330460.1  49.270  274 139  0  42  315   69  342
## 6298 NP_001349068.1 XP_021330460.1  52.344  256 122  0  60  315  115  370
## 6299 NP_001349068.1 XP_021330460.1  48.659  261 134  0  58  318  169  429
```

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## 6300 NP_001349068.1 XP_021330460.1  45.965  285 126  1  60  316  227  511
## 6301 NP_001349068.1 XP_021330460.1  48.413  252 130  0  60  311  199  450
## 6302 NP_001349068.1 XP_021330460.1  40.909   44  26  0  46   89  493  536
## 6303 NP_001349068.1 XP_021331104.1  48.026  304 155  2  33  333 1074 1377
## 6304 NP_001349068.1 XP_021331104.1  53.282  259 121  0  58  316  933 1191
## 6305 NP_001349068.1 XP_021331104.1  52.290  262 125  0  58  319 1045 1306
## 6306 NP_001349068.1 XP_021331104.1  50.526  285 137  2  49  329  361  645
## 6307 NP_001349068.1 XP_021331104.1  48.299  294 152  0  22  315  869 1162
## 6308 NP_001349068.1 XP_021331104.1  52.326  258 123  0  58  315  989 1246
## 6309 NP_001349068.1 XP_021331104.1  51.938  258 124  0  58  315 1129 1386
## 6310 NP_001349068.1 XP_021331104.1  52.510  259 123  0  58  316  961 1219
## 6311 NP_001349068.1 XP_021331104.1  50.763  262 129  0  58  319 1017 1278
## 6312 NP_001349068.1 XP_021331104.1  54.264  258 118  0  58  315  793 1050
## 6313 NP_001349068.1 XP_021331104.1  51.351  259 126  0  58  316  877 1135
## 6314 NP_001349068.1 XP_021331104.1  52.713  258 122  0  58  315 1073 1330
## 6315 NP_001349068.1 XP_021331104.1  52.434  267 126  1  50  315   52  318
## 6316 NP_001349068.1 XP_021331104.1  47.855  303 128  3  58  330  285  587
## 6317 NP_001349068.1 XP_021331104.1  51.724  261 123  1  58  315  342  602
## 6318 NP_001349068.1 XP_021331104.1  51.128  266 130  0  50  315  813 1078
## 6319 NP_001349068.1 XP_021331104.1  50.545  275 134  2  58  330   89  363
## 6320 NP_001349068.1 XP_021331104.1  49.097  277 140  1  58  333  849 1125
## 6321 NP_001349068.1 XP_021331104.1  48.252  286 120  1  58  315  681  966
## 6322 NP_001349068.1 XP_021331104.1  47.260  292 123  2  58  318  566  857
## 6323 NP_001349068.1 XP_021331104.1  49.225  258 131  0  58  315  625  882
## 6324 NP_001349068.1 XP_021331104.1  44.444  306 159  3  21  315  493  798
## 6325 NP_001349068.1 XP_021331104.1  49.612  258 130  0  58  315  765 1022
## 6326 NP_001349068.1 XP_021331446.1  52.713  258 122  0  58  315  173  430
## 6327 NP_001349068.1 XP_021331446.1  53.101  258 121  0  58  315  229  486
## 6328 NP_001349068.1 XP_021331446.1  52.734  256 121  0  58  313  257  512
## 6329 NP_001349068.1 XP_021331446.1  52.713  258 122  0  58  315  285  542
## 6330 NP_001349068.1 XP_021331446.1  52.713  258 122  0  58  315   89  346
## 6331 NP_001349068.1 XP_021331446.1  50.775  258 127  0  58  315  117  374
## 6332 NP_001349068.1 XP_021331446.1  50.775  258 127  0  58  315  313  570
## 6333 NP_001349068.1 XP_021331446.1  51.938  258 124  0  58  315  145  402
## 6334 NP_001349068.1 XP_021331446.1  45.806  310 154  2  20  315    9  318
## 6335 NP_001349068.1 XP_021331446.1  48.070  285 146  1  33  315  174  458
## 6336 NP_001349068.1 XP_021331446.1  53.648  233 108  0  58  290  341  573
## 6337 NP_001349068.1 XP_021331029.1  52.157  255 122  0  58  312  109  363
## 6338 NP_001349068.1 XP_021331029.1  51.172  256 125  0  58  313   81  336
## 6339 NP_001349068.1 XP_021331029.1  46.622  296 156  2  19  313   14  308
## 6340 NP_001349068.1 XP_021331029.1  46.970  198 105  0 119  316   58  255
## 6341 NP_001349068.1 XP_021330458.1  51.172  256 125  0  58  313   79  334
## 6342 NP_001349068.1 XP_021330458.1  52.191  251 120  0  63  313   56  306
## 6343 NP_001349068.1 XP_021330458.1  47.636  275 138  1  45  313  116  390
## 6344 NP_001349068.1 XP_021330458.1  49.219  256 130  0  58  313  107  362
## 6345 NP_001349068.1 XP_021330458.1  52.663  169  80  0 147  315   56  224
## 6346 NP_001349068.1 XP_021330458.1  45.550  191  98  1  45  229  228  418
## 6347 NP_001349068.1 XP_009299138.2  52.549  255 121  0  58  312  111  365
## 6348 NP_001349068.1 XP_009299138.2  50.980  255 125  0  59  313   56  310
## 6349 NP_001349068.1 XP_009299138.2  50.584  257 127  0  59  315   84  340
## 6350 NP_001349068.1 XP_009299138.2  49.756  205 103  0 109  313   50  254
## 6351 NP_001349068.1 XP_021331115.1  52.060  267 128  0  49  315  404  670
## 6352 NP_001349068.1 XP_021331115.1  51.550  258 125  0  58  315  329  586
## 6353 NP_001349068.1 XP_021331115.1  51.550  258 125  0  58  315  357  614
```

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## 6354 NP_001349068.1 XP_021331115.1  51.550  258 125  0  58  315  385  642
## 6355 NP_001349068.1 XP_021331115.1  51.163  258 126  0  58  315  301  558
## 6356 NP_001349068.1 XP_021331115.1  50.388  258 128  0  58  315  441  698
## 6357 NP_001349068.1 XP_021331115.1  47.388  268 141  0  48  315  123  390
## 6358 NP_001349068.1 XP_021331115.1  47.015  268 142  0  48  315  207  474
## 6359 NP_001349068.1 XP_021331115.1  47.794  272 141  1  60  330  275  546
## 6360 NP_001349068.1 XP_021331115.1  49.600  250 126  0  58  307  469  718
## 6361 NP_001349068.1 XP_021331115.1  47.674  258 135  0  58  315  161  418
## 6362 NP_001349068.1 XP_021331115.1  49.225  258 131  0  58  315  245  502
## 6363 NP_001349068.1 XP_021331115.1  47.809  251 131  0  63  313   82  332
## 6364 NP_001349068.1 XP_021331115.1  42.328  189 108  1 146  333   81  269
## 6365 NP_001349068.1 XP_021331115.1  42.857  147  84  0 166  312   73  219
## 6366 NP_001349068.1 XP_021331401.1  50.725  276 135  1  40  315  380  654
## 6367 NP_001349068.1 XP_021331401.1  55.426  258 115  0  58  315  481  738
## 6368 NP_001349068.1 XP_021331401.1  54.264  258 118  0  58  315  593  850
## 6369 NP_001349068.1 XP_021331401.1  52.713  258 122  0  58  315  621  878
## 6370 NP_001349068.1 XP_021331401.1  53.101  258 121  0  58  315  565  822
## 6371 NP_001349068.1 XP_021331401.1  51.825  274 131  1  58  330  537  810
## 6372 NP_001349068.1 XP_021331401.1  49.147  293 146  2  49  339 1226 1517
## 6373 NP_001349068.1 XP_021331401.1  52.896  259 122  0  58  316  117  375
## 6374 NP_001349068.1 XP_021331401.1  48.921  278 141  1  38  315  657  933
## 6375 NP_001349068.1 XP_021331401.1  47.987  298 127  1  46  315 1335 1632
## 6376 NP_001349068.1 XP_021331401.1  51.938  258 124  0  58  315  453  710
## 6377 NP_001349068.1 XP_021331401.1  51.321  265 129  0  49  313 1198 1462
## 6378 NP_001349068.1 XP_021331401.1  47.987  298 150  2  19  315   25  318
## 6379 NP_001349068.1 XP_021331401.1  50.000  276 137  1  40  315  408  682
## 6380 NP_001349068.1 XP_021331401.1  49.814  269 135  0  47  315  638  906
## 6381 NP_001349068.1 XP_021331401.1  50.752  266 131  0  50  315 1143 1408
## 6382 NP_001349068.1 XP_021331401.1  48.881  268 137  0  49  316  192  459
## 6383 NP_001349068.1 XP_021331401.1  49.621  264 133  0  50  313   81  344
## 6384 NP_001349068.1 XP_021331401.1  51.550  258 125  0  58  315 1179 1436
## 6385 NP_001349068.1 XP_021331401.1  50.763  262 128  1  58  319  873 1133
## 6386 NP_001349068.1 XP_021331401.1  47.368  285 123  1  58  315 1096 1380
## 6387 NP_001349068.1 XP_021331401.1  46.102  295 131  1  49  315  276  570
## 6388 NP_001349068.1 XP_021331401.1  50.775  258 127  0  58  315  257  514
## 6389 NP_001349068.1 XP_021331401.1  50.000  256 128  0  61  316  344  599
## 6390 NP_001349068.1 XP_021331401.1  45.098  306 140  1  38  315 1271 1576
## 6391 NP_001349068.1 XP_021331401.1  44.586  314 147  1  29  315 1011 1324
## 6392 NP_001349068.1 XP_021331401.1  46.853  286 124  1  58  315 1403 1688
## 6393 NP_001349068.1 XP_021331401.1  50.000  262 129  2  50  311  893 1152
## 6394 NP_001349068.1 XP_021331401.1  45.690  232  98  1  58  261 1459 1690
## 6395 NP_001349068.1 XP_021331401.1  50.289  173  86  0 147  319   66  238
## 6396 NP_001349068.1 XP_021331401.1  48.993  149  76  0  58  206 1543 1691
## 6397 NP_001349068.1 XP_017211055.1  50.996  251 123  0  63  313   82  332
## 6398 NP_001349068.1 XP_017211055.1  44.765  277 152  1  58  333  161  437
## 6399 NP_001349068.1 XP_017211055.1  43.478  276 150  1  45  314  170  445
## 6400 NP_001349068.1 XP_017211055.1  45.669  254 138  0  58  311  133  386
## 6401 NP_001349068.1 XP_017211055.1  46.429  168  90  0 146  313   81  248
## 6402 NP_001349068.1 XP_017211055.1  49.296  142  72  0 172  313   79  220
## 6403 NP_001349068.1 XP_021330858.1  50.360  278 132  1  44  315  210  487
## 6404 NP_001349068.1 XP_021330858.1  51.737  259 125  0  58  316  174  432
## 6405 NP_001349068.1 XP_021330858.1  51.145  262 128  0  58  319  118  379
## 6406 NP_001349068.1 XP_021330858.1  51.562  256 124  0  58  313  398  653
## 6407 NP_001349068.1 XP_021330858.1  49.813  267 134  0  49  315  193  459
```

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## 6408 NP_001349068.1 XP_021330858.1  52.174  253 121  0  60  312  316  568
## 6409 NP_001349068.1 XP_021330858.1  49.458  277 139  1  58  333  370  646
## 6410 NP_001349068.1 XP_021330858.1  48.450  258 133  0  58  315   90  347
## 6411 NP_001349068.1 XP_021330858.1  50.988  253 124  0  63  315   39  291
## 6412 NP_001349068.1 XP_021330858.1  49.612  258 130  0  58  315   62  319
## 6413 NP_001349068.1 XP_021330858.1  50.403  248 123  0  58  305  426  673
## 6414 NP_001349068.1 XP_021330858.1  48.689  267 136  1  50  315  727  993
## 6415 NP_001349068.1 XP_021330858.1  48.473  262 135  0  58  319  764 1025
## 6416 NP_001349068.1 XP_021330858.1  42.215  289 137  2  58  316  594  882
## 6417 NP_001349068.1 XP_021330858.1  38.535  314 162  4  49  331  473  786
## 6418 NP_001349068.1 XP_021330858.1  45.455  198 108  0 119  316   39  236
## 6419 NP_001349068.1 XP_021330858.1  47.586  145  76  0 175  319   39  183
## 6420 NP_001349068.1 XP_021330858.1  35.849  106  40  1  58  135  960 1065
## 6421 NP_001349068.1 XP_021329622.1  53.488  258 120  0  58  315  191  448
## 6422 NP_001349068.1 XP_021329622.1  51.550  258 125  0  58  315  527  784
## 6423 NP_001349068.1 XP_021329622.1  52.713  258 122  0  58  315  499  756
## 6424 NP_001349068.1 XP_021329622.1  52.734  256 121  0  58  313  303  558
## 6425 NP_001349068.1 XP_021329622.1  48.708  271 139  0  49  319   98  368
## 6426 NP_001349068.1 XP_021329622.1  49.612  258 130  0  58  315  387  644
## 6427 NP_001349068.1 XP_021329622.1  50.752  266 131  0  48  313   69  334
## 6428 NP_001349068.1 XP_021329622.1  52.734  256 121  0  60  315  669  924
## 6429 NP_001349068.1 XP_021329622.1  50.391  256 127  0  58  313  135  390
## 6430 NP_001349068.1 XP_021329622.1  49.225  258 131  0  58  315  443  700
## 6431 NP_001349068.1 XP_021329622.1  51.550  258 125  0  58  315  247  504
## 6432 NP_001349068.1 XP_021329622.1  50.388  258 128  0  58  315  583  840
## 6433 NP_001349068.1 XP_021329622.1  50.775  258 127  0  58  315  555  812
## 6434 NP_001349068.1 XP_021329622.1  50.781  256 126  0  60  315  613  868
## 6435 NP_001349068.1 XP_021329622.1  50.965  259 127  0  58  316  219  477
## 6436 NP_001349068.1 XP_021329622.1  51.550  258 125  0  58  315  163  420
## 6437 NP_001349068.1 XP_021329622.1  49.416  257 130  0  60  316  473  729
## 6438 NP_001349068.1 XP_021329622.1  49.225  258 131  0  58  315  275  532
## 6439 NP_001349068.1 XP_021329622.1  49.612  258 130  0  58  315  639  896
## 6440 NP_001349068.1 XP_021329622.1  48.837  258 132  0  58  315  359  616
## 6441 NP_001349068.1 XP_021329622.1  50.000  256 128  0  60  315   53  308
## 6442 NP_001349068.1 XP_021329622.1  51.724  232 112  0  60  291  697  928
## 6443 NP_001349068.1 XP_021329622.1  48.529  204 105  0  58  261  723  926
## 6444 NP_001349068.1 XP_021329622.1  46.203  158  85  0  49  206  770  927
## 6445 NP_001349068.1 XP_021329622.1  46.721  122  65  0  58  179  807  928
## 6446 NP_001349068.1 NP_001314932.1  50.787  254 125  0  60  313   91  344
## 6447 NP_001349068.1 NP_001314932.1  49.057  265 134  1  50  313   52  316
## 6448 NP_001349068.1 NP_001314932.1  51.012  247 117  2  69  315   48  290
## 6449 NP_001349068.1 NP_001314932.1  50.877  228 112  0  58  285  117  344
## 6450 NP_001349068.1 XP_021329720.1  51.953  256 123  0  58  313  149  404
## 6451 NP_001349068.1 XP_021329720.1  50.391  256 127  0  58  313  177  432
## 6452 NP_001349068.1 XP_021329720.1  51.172  256 125  0  58  313  121  376
## 6453 NP_001349068.1 XP_021329720.1  49.805  257 129  0  58  314  205  461
## 6454 NP_001349068.1 XP_021329720.1  50.000  256 128  0  58  313   93  348
## 6455 NP_001349068.1 XP_021329720.1  48.819  254 130  0  58  311  261  514
## 6456 NP_001349068.1 XP_021329720.1  47.368  266 140  0  48  313   55  320
## 6457 NP_001349068.1 XP_021329720.1  48.302  265 137  0  49  313  224  488
## 6458 NP_001349068.1 XP_021329720.1  48.606  251 129  0  63  313   42  292
## 6459 NP_001349068.1 XP_021329720.1  43.494  269 148  1  38  306  273  537
## 6460 NP_001349068.1 XP_021329720.1  48.241  199 103  0 115  313   38  236
## 6461 NP_001349068.1 XP_021329720.1  45.324  139  76  0  58  196  401  539
```

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## 6462 NP_001349068.1 XP_021329720.1  47.656  128  66  1 204  330   43  170
## 6463 NP_001349068.1 XP_021331332.1  49.819  277 138  1  56  331  619  895
## 6464 NP_001349068.1 XP_021331332.1  48.029  279 139  1  44  316  657  935
## 6465 NP_001349068.1 XP_021331332.1  51.163  258 126  0  58  315  593  850
## 6466 NP_001349068.1 XP_021331332.1  53.101  258 121  0  58  315  201  458
## 6467 NP_001349068.1 XP_021331332.1  51.562  256 124  0  58  313  733  988
## 6468 NP_001349068.1 XP_021331332.1  51.163  258 126  0  58  315  565  822
## 6469 NP_001349068.1 XP_021331332.1  50.181  277 137  1  58  333  789 1065
## 6470 NP_001349068.1 XP_021331332.1  50.000  258 129  0  58  315  817 1074
## 6471 NP_001349068.1 XP_021331332.1  50.000  258 129  0  58  315  649  906
## 6472 NP_001349068.1 XP_021331332.1  44.586  314 167  1   6  319  324  630
## 6473 NP_001349068.1 XP_021331332.1  51.938  258 124  0  58  315  285  542
## 6474 NP_001349068.1 XP_021331332.1  51.562  256 124  0  60  315  707  962
## 6475 NP_001349068.1 XP_021331332.1  50.562  267 132  0  49  315  248  514
## 6476 NP_001349068.1 XP_021331332.1  50.000  258 129  0  58  315  761 1018
## 6477 NP_001349068.1 XP_021331332.1  50.388  258 128  0  58  315  509  766
## 6478 NP_001349068.1 XP_021331332.1  51.145  262 128  0  58  319  845 1106
## 6479 NP_001349068.1 XP_021331332.1  50.775  258 127  0  58  315  229  486
## 6480 NP_001349068.1 XP_021331332.1  51.938  258 124  0  58  315  313  570
## 6481 NP_001349068.1 XP_021331332.1  50.000  258 129  0  58  315  537  794
## 6482 NP_001349068.1 XP_021331332.1  46.358  302 133  2  58  330  397  698
## 6483 NP_001349068.1 XP_021331332.1  48.364  275 141  1  60  333  175  449
## 6484 NP_001349068.1 XP_021331332.1  47.518  282 147  1  50  330  137  418
## 6485 NP_001349068.1 XP_021331332.1  48.432  287 147  1  29  315  984 1269
## 6486 NP_001349068.1 XP_021331332.1  49.225  258 131  0  58  315  453  710
## 6487 NP_001349068.1 XP_021331332.1  47.101  276 140  1  44  313   69  344
## 6488 NP_001349068.1 XP_021331332.1  50.000  258 129  0  58  315   61  318
## 6489 NP_001349068.1 XP_021331332.1  48.315  267 138  0  49  315  108  374
## 6490 NP_001349068.1 XP_021331332.1  51.181  254 123  1  58  311  873 1125
## 6491 NP_001349068.1 XP_021331332.1  45.522  268 146  0  48  315   23  290
## 6492 NP_001349068.1 XP_021331332.1  45.312  256 140  0  60  315    7  262
## 6493 NP_001349068.1 XP_021331332.1  47.436  234 123  0  82  315    1  234
## 6494 NP_001349068.1 XP_021331332.1  48.529  204 104  1  58  261 1069 1271
## 6495 NP_001349068.1 XP_021331332.1  47.134  157  83  0  50  206 1116 1272
## 6496 NP_001349068.1 XP_021331509.1  49.811  265 132  1  50  313   43  307
## 6497 NP_001349068.1 XP_021331509.1  48.617  253 130  0  58  310   80  332
## 6498 NP_001349068.1 XP_021331509.1  50.000  200 100  0  58  257  136  335
## 6499 NP_001349068.1 XP_017211183.1  49.811  265 132  1  50  313   52  316
## 6500 NP_001349068.1 XP_017211183.1  49.174  242 123  0  49  290   80  321
## 6501 NP_001349068.1 XP_017211183.1  52.482  141  67  0 175  315   66  206
## 6502 NP_001349068.1 XP_021331157.1  45.714  315 142  2  29  315  115  428
## 6503 NP_001349068.1 XP_021331157.1  49.301  286 116  2  58  315  200  484
## 6504 NP_001349068.1 XP_021331157.1  50.000  266 133  0  50  315  247  512
## 6505 NP_001349068.1 XP_021331157.1  51.351  259 124  2  58  316    5  261
## 6506 NP_001349068.1 XP_021331157.1  51.681  238 114  1  82  319    1  237
## 6507 NP_001349068.1 XP_021331157.1  47.107  242 128  0  49  290  274  515
## 6508 NP_001349068.1 XP_009300324.1  51.953  256 123  0  58  313  132  387
## 6509 NP_001349068.1 XP_009300324.1  50.391  256 127  0  58  313  160  415
## 6510 NP_001349068.1 XP_009300324.1  51.172  256 125  0  58  313  104  359
## 6511 NP_001349068.1 XP_009300324.1  49.805  257 129  0  58  314  188  444
## 6512 NP_001349068.1 XP_009300324.1  50.000  256 128  0  58  313   76  331
## 6513 NP_001349068.1 XP_009300324.1  48.819  254 130  0  58  311  244  497
## 6514 NP_001349068.1 XP_009300324.1  47.368  266 140  0  48  313   38  303
## 6515 NP_001349068.1 XP_009300324.1  48.302  265 137  0  49  313  207  471
```

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## 6516 NP_001349068.1 XP_009300324.1  48.606  251 129  0  63  313   25  275
## 6517 NP_001349068.1 XP_009300324.1  43.494  269 148  1  38  306  256  520
## 6518 NP_001349068.1 XP_009300324.1  48.241  199 103  0 115  313   21  219
## 6519 NP_001349068.1 XP_009300324.1  45.324  139  76  0  58  196  384  522
## 6520 NP_001349068.1 XP_009300324.1  47.656  128  66  1 204  330   26  153
## 6521 NP_001349068.1 NP_001315634.1  51.383  253 123  0  63  315   57  309
## 6522 NP_001349068.1 NP_001315634.1  51.953  256 123  0  58  313   80  335
## 6523 NP_001349068.1 NP_001315634.1  48.908  229 117  0  58  286  108  336
## 6524 NP_001349068.1 NP_001315634.1  43.678  174  96  1  33  204  165  338
## 6525 NP_001349068.1 NP_001314792.1  48.364  275 141  1  42  315   44  318
## 6526 NP_001349068.1 NP_001314792.1  53.879  232 107  0  58  289   89  320
## 6527 NP_001349068.1 NP_001314792.1  48.035  229 119  0  91  319   66  294
## 6528 NP_001349068.1 XP_021331405.1  52.434  267 127  0  49  315  192  458
## 6529 NP_001349068.1 XP_021331405.1  53.488  258 120  0  58  315  229  486
## 6530 NP_001349068.1 XP_021331405.1  51.163  258 126  0  58  315  369  626
## 6531 NP_001349068.1 XP_021331405.1  51.550  258 125  0  58  315  313  570
## 6532 NP_001349068.1 XP_021331405.1  52.434  267 127  0  49  315   80  346
## 6533 NP_001349068.1 XP_021331405.1  51.550  258 125  0  58  315  285  542
## 6534 NP_001349068.1 XP_021331405.1  51.685  267 129  0  49  315  108  374
## 6535 NP_001349068.1 XP_021331405.1  50.775  258 126  1  58  315  397  653
## 6536 NP_001349068.1 XP_021331405.1  51.908  262 126  0  58  319    5  266
## 6537 NP_001349068.1 XP_021331405.1  51.550  258 125  0  58  315  257  514
## 6538 NP_001349068.1 XP_021331405.1  50.562  267 132  0  49  315  136  402
## 6539 NP_001349068.1 XP_021331405.1  48.014  277 143  1  58  333  341  617
## 6540 NP_001349068.1 XP_021331405.1  51.163  258 126  0  58  315  173  430
## 6541 NP_001349068.1 XP_021331405.1  49.813  267 133  1  50  316  585  850
## 6542 NP_001349068.1 XP_021331405.1  51.163  258 126  0  58  315   61  318
## 6543 NP_001349068.1 XP_021331405.1  50.000  268 134  0  48  315   23  290
## 6544 NP_001349068.1 XP_021331405.1  52.564  234 111  0  82  315    1  234
## 6545 NP_001349068.1 XP_021331405.1  51.181  254 122  2  58  311  621  872
## 6546 NP_001349068.1 XP_021331405.1  48.828  256 130  1  58  313  704  958
## 6547 NP_001349068.1 XP_021331405.1  45.217  230 125  1  28  257  730  958
## 6548 NP_001349068.1 XP_021331047.1  52.852  263 120  1  58  316  309  571
## 6549 NP_001349068.1 XP_021331047.1  51.362  257 121  1  58  310  337  593
## 6550 NP_001349068.1 XP_021331047.1  48.921  278 137  2  58  330  281  558
## 6551 NP_001349068.1 XP_021331047.1  50.000  258 129  0  58  315  253  510
## 6552 NP_001349068.1 XP_021331047.1  44.194  310 121  2  58  315  173  482
## 6553 NP_001349068.1 XP_021331047.1  50.382  262 126  1  58  319    5  262
## 6554 NP_001349068.1 XP_021331047.1  48.718  234 120  0  82  315    1  234
## 6555 NP_001349068.1 XP_021331047.1  50.216  231 111  2 112  338    3  233
## 6556 NP_001349068.1 XP_021331047.1  46.988  166  87  1 166  330    1  166
## 6557 NP_001349068.1 XP_021331108.1  50.000  276 137  1  40  315  353  627
## 6558 NP_001349068.1 XP_021331108.1  53.668  259 119  1  58  315   61  319
## 6559 NP_001349068.1 XP_021331108.1  51.460  274 132  1  58  330  426  699
## 6560 NP_001349068.1 XP_021331108.1  53.101  258 121  0  58  315  342  599
## 6561 NP_001349068.1 XP_021331108.1  51.254  279 135  1  56  333  480  758
## 6562 NP_001349068.1 XP_021331108.1  54.688  256 116  0  58  313  538  793
## 6563 NP_001349068.1 XP_021331108.1  53.101  258 121  0  58  315  566  823
## 6564 NP_001349068.1 XP_021331108.1  51.111  270 132  0  46  315  582  851
## 6565 NP_001349068.1 XP_021331108.1  53.282  259 121  0  58  316  202  460
## 6566 NP_001349068.1 XP_021331108.1  52.896  259 122  0  58  316  314  572
## 6567 NP_001349068.1 XP_021331108.1  52.326  258 123  0  58  315  258  515
## 6568 NP_001349068.1 XP_021331108.1  52.326  258 123  0  58  315  622  879
## 6569 NP_001349068.1 XP_021331108.1  51.550  258 125  0  58  315  650  907
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```
## 6570 NP_001349068.1 XP_021331108.1  51.938  258 124  0  58  315  230  487
## 6571 NP_001349068.1 XP_021331108.1  51.550  258 125  0  58  315  678  935
## 6572 NP_001349068.1 XP_021331108.1  53.307  257 119  1  58  313  173  429
## 6573 NP_001349068.1 XP_021331108.1  51.938  258 124  0  58  315  734  991
## 6574 NP_001349068.1 XP_021331108.1  48.727  275 137  1  41  315  385  655
## 6575 NP_001349068.1 XP_021331108.1  51.163  258 126  0  58  315  510  767
## 6576 NP_001349068.1 XP_021331108.1  52.326  258 123  0  58  315  286  543
## 6577 NP_001349068.1 XP_021331108.1  51.550  258 125  0  58  315  762 1019
## 6578 NP_001349068.1 XP_021331108.1  50.193  259 128  1  58  315    5  263
## 6579 NP_001349068.1 XP_021331108.1  48.689  267 137  0  49  315  697  963
## 6580 NP_001349068.1 XP_021331108.1  54.468  235 106  1  82  315    1  235
## 6581 NP_001349068.1 XP_021331108.1  49.356  233 118  0  58  290  790 1022
## 6582 NP_001349068.1 XP_021331195.1  54.688  256 116  0  58  313 1155 1410
## 6583 NP_001349068.1 XP_021331195.1  53.101  258 121  0  58  315 1099 1356
## 6584 NP_001349068.1 XP_021331195.1  52.713  258 122  0  58  315  959 1216
## 6585 NP_001349068.1 XP_021331195.1  47.039  304 131  1  46  319  553  856
## 6586 NP_001349068.1 XP_021331195.1  52.920  274 128  1  58  330   89  362
## 6587 NP_001349068.1 XP_021331195.1  52.713  258 122  0  58  315  791 1048
## 6588 NP_001349068.1 XP_021331195.1  51.938  258 124  0  58  315  987 1244
## 6589 NP_001349068.1 XP_021331195.1  53.516  256 119  0  58  313  651  906
## 6590 NP_001349068.1 XP_021331195.1  50.181  277 137  1  58  333 1127 1403
## 6591 NP_001349068.1 XP_021331195.1  52.326  258 123  0  58  315  679  936
## 6592 NP_001349068.1 XP_021331195.1  52.569  253 120  0  63  315  628  880
## 6593 NP_001349068.1 XP_021331195.1  51.953  256 123  0  58  313 1183 1438
## 6594 NP_001349068.1 XP_021331195.1  51.163  258 126  0  58  315  903 1160
## 6595 NP_001349068.1 XP_021331195.1  52.326  258 123  0  58  315  313  570
## 6596 NP_001349068.1 XP_021331195.1  52.809  267 125  1  50  315   52  318
## 6597 NP_001349068.1 XP_021331195.1  52.222  270 129  0  46  315  189  458
## 6598 NP_001349068.1 XP_021331195.1  51.163  258 126  0  58  315  257  514
## 6599 NP_001349068.1 XP_021331195.1  51.550  258 125  0  58  315 1015 1272
## 6600 NP_001349068.1 XP_021331195.1  53.906  256 118  0  60  315  175  430
## 6601 NP_001349068.1 XP_021331195.1  51.550  258 125  0  58  315  229  486
## 6602 NP_001349068.1 XP_021331195.1  51.163  258 126  0  58  315 1071 1328
## 6603 NP_001349068.1 XP_021331195.1  50.775  258 127  0  58  315  931 1188
## 6604 NP_001349068.1 XP_021331195.1  46.154  286 152  1  33  316 1016 1301
## 6605 NP_001349068.1 XP_021331195.1  51.938  258 124  0  58  315  145  402
## 6606 NP_001349068.1 XP_021331195.1  48.252  286 118  1  60  315  539  824
## 6607 NP_001349068.1 XP_021331195.1  52.713  258 122  0  58  315  117  374
## 6608 NP_001349068.1 XP_021331195.1  50.000  256 128  0  58  313 1211 1466
## 6609 NP_001349068.1 XP_021331195.1  50.579  259 128  0  58  316  341  599
## 6610 NP_001349068.1 XP_021331195.1  49.807  259 130  0  58  316  735  993
## 6611 NP_001349068.1 XP_021331195.1  51.163  258 126  0  58  315  847 1104
## 6612 NP_001349068.1 XP_021331195.1  50.000  258 129  0  58  315 1267 1524
## 6613 NP_001349068.1 XP_021331195.1  49.813  267 134  0  49  315  754 1020
## 6614 NP_001349068.1 XP_021331195.1  50.000  258 129  0  58  315  707  964
## 6615 NP_001349068.1 XP_021331195.1  49.807  259 130  0  58  316  875 1133
## 6616 NP_001349068.1 XP_021331195.1  49.618  262 132  0  49  310  360  621
## 6617 NP_001349068.1 XP_021331195.1  49.219  256 130  0  58  313 1239 1494
## 6618 NP_001349068.1 XP_021331195.1  38.264  311 140  1  58  316 1323 1633
## 6619 NP_001349068.1 XP_021331195.1  39.146  281 147  1  58  314 1379 1659
## 6620 NP_001349068.1 XP_021331376.1  49.259  270 137  0  46  315  357  626
## 6621 NP_001349068.1 XP_021331376.1  50.775  258 127  0  58  315  285  542
## 6622 NP_001349068.1 XP_021331376.1  50.741  270 133  0  46  315  441  710
## 6623 NP_001349068.1 XP_021331376.1  53.488  258 120  0  58  315  509  766
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## 6624 NP_001349068.1 XP_021331376.1  49.458  277 139  1  58  333  397  673
## 6625 NP_001349068.1 XP_021331376.1  51.938  258 124  0  58  315  425  682
## 6626 NP_001349068.1 XP_021331376.1  53.725  255 118  0  58  312  593  847
## 6627 NP_001349068.1 XP_021331376.1  50.775  258 127  0  58  315  173  430
## 6628 NP_001349068.1 XP_021331376.1  50.752  266 131  0  50  315  109  374
## 6629 NP_001349068.1 XP_021331376.1  51.953  256 123  0  60  315  231  486
## 6630 NP_001349068.1 XP_021331376.1  49.225  258 131  0  58  315    5  262
## 6631 NP_001349068.1 XP_021331376.1  49.630  270 136  0  46  315  245  514
## 6632 NP_001349068.1 XP_021331376.1  49.612  258 130  0  58  315  201  458
## 6633 NP_001349068.1 XP_021331376.1  48.561  278 137  1  44  315   13  290
## 6634 NP_001349068.1 XP_021331376.1  50.973  257 126  0  59  315  566  822
## 6635 NP_001349068.1 XP_021331376.1  45.896  268 145  0  48  315   79  346
## 6636 NP_001349068.1 XP_021331376.1  47.436  234 123  0  82  315    1  234
## 6637 NP_001349068.1 XP_021331131.1  50.198  253 126  0  63  315   52  304
## 6638 NP_001349068.1 XP_021331131.1  42.642  265 152  0  50  314  123  387
## 6639 NP_001349068.1 XP_021331131.1  42.751  269 154  0  48  316   93  361
## 6640 NP_001349068.1 XP_021331106.1  53.077  260 122  0  56  315  339  598
## 6641 NP_001349068.1 XP_021331106.1  53.846  260 120  0  56  315  423  682
## 6642 NP_001349068.1 XP_021331106.1  51.550  258 125  0  58  315  313  570
## 6643 NP_001349068.1 XP_021331106.1  51.938  258 124  0  58  315  397  654
## 6644 NP_001349068.1 XP_021331106.1  51.341  261 127  0  56  316  563  823
## 6645 NP_001349068.1 XP_021331106.1  50.385  260 129  0  56  315  283  542
## 6646 NP_001349068.1 XP_021331106.1  51.154  260 127  0  56  315  171  430
## 6647 NP_001349068.1 XP_021331106.1  50.000  260 130  0  56  315    3  262
## 6648 NP_001349068.1 XP_021331106.1  52.344  256 122  0  60  315  231  486
## 6649 NP_001349068.1 XP_021331106.1  48.746  279 142  1  56  333  479  757
## 6650 NP_001349068.1 XP_021331106.1  48.746  279 142  1  56  333   87  365
## 6651 NP_001349068.1 XP_021331106.1  50.958  261 128  0  56  316  507  767
## 6652 NP_001349068.1 XP_021331106.1  51.172  256 125  0  60  315  259  514
## 6653 NP_001349068.1 XP_021331106.1  50.000  260 130  0  56  315   59  318
## 6654 NP_001349068.1 XP_021331106.1  48.864  264 135  0  56  319  143  406
## 6655 NP_001349068.1 XP_021331106.1  48.519  270 139  0  46  315  525  794
## 6656 NP_001349068.1 XP_021331106.1  48.339  271 140  0  45  315  608  878
## 6657 NP_001349068.1 XP_021331106.1  47.635  296 121  1  56  317  843 1138
## 6658 NP_001349068.1 XP_021331106.1  52.137  234 112  0  82  315    1  234
## 6659 NP_001349068.1 XP_021331106.1  45.578  294 126  1  56  315  647  940
## 6660 NP_001349068.1 XP_021331106.1  52.486  181  86  0 139  319    2  182
## 6661 NP_001349068.1 XP_021327005.1  50.000  270 134  1  42  310   34  303
## 6662 NP_001349068.1 XP_021327005.1  49.561  228 115  0  88  315   53  280
## 6663 NP_001349068.1 XP_021327005.1  38.644  295 145  3  58  316  247  541
## 6664 NP_001349068.1 XP_021327005.1  38.961  308 148  3  49  318  210  515
## 6665 NP_001349068.1 XP_021327005.1  54.335  173  79  0 144  316   53  225
## 6666 NP_001349068.1 XP_021327005.1  38.721  297 134  3  56  310  273  563
## 6667 NP_001349068.1 XP_021327005.1  48.544  206 105  1  50  254  358  563
## 6668 NP_001349068.1 XP_021330544.1  50.000  270 134  1  42  310   34  303
## 6669 NP_001349068.1 XP_021330544.1  49.561  228 115  0  88  315   53  280
## 6670 NP_001349068.1 XP_021330544.1  38.644  295 145  3  58  316  247  541
## 6671 NP_001349068.1 XP_021330544.1  38.961  308 148  3  49  318  210  515
## 6672 NP_001349068.1 XP_021330544.1  54.335  173  79  0 144  316   53  225
## 6673 NP_001349068.1 XP_021330544.1  38.721  297 134  3  56  310  273  563
## 6674 NP_001349068.1 XP_021330544.1  48.544  206 105  1  50  254  358  563
## 6675 NP_001349068.1 XP_021331254.1  49.612  258 130  0  58  315  134  391
## 6676 NP_001349068.1 XP_021331254.1  46.367  289 154  1  46  333   94  382
## 6677 NP_001349068.1 XP_021331254.1  48.375  277 142  1  58  333   78  354
```

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## 6678 NP_001349068.1 XP_021331254.1  48.837  258 132  0  58  315   22  279
## 6679 NP_001349068.1 XP_021331254.1  50.996  251 123  0  65  315    1  251
## 6680 NP_001349068.1 XP_021331254.1  48.519  270 139  0  46  315  150  419
## 6681 NP_001349068.1 XP_021331254.1  48.927  233 119  0  58  290  190  422
## 6682 NP_001349068.1 XP_021331254.1  45.977   87  47  0 233  319    1   87
## 6683 NP_001349068.1 XP_017209942.1  51.953  256 123  0  58  313   60  315
## 6684 NP_001349068.1 XP_017209942.1  49.813  267 133  1  50  315   23  289
## 6685 NP_001349068.1 XP_017209942.1  49.782  229 115  0  58  286   88  316
## 6686 NP_001349068.1 XP_017209942.1  43.678  174  96  1  33  204  145  318
## 6687 NP_001349068.1 XP_001923745.2  51.163  258 126  0  58  315  425  682
## 6688 NP_001349068.1 XP_001923745.2  50.388  258 128  0  58  315  397  654
## 6689 NP_001349068.1 XP_001923745.2  49.627  268 135  0  46  313  217  484
## 6690 NP_001349068.1 XP_001923745.2  49.612  258 130  0  58  315  313  570
## 6691 NP_001349068.1 XP_001923745.2  50.388  258 128  0  58  315  369  626
## 6692 NP_001349068.1 XP_001923745.2  48.175  274 141  1  58  330  341  614
## 6693 NP_001349068.1 XP_001923745.2  49.618  262 132  0  58  319  145  406
## 6694 NP_001349068.1 XP_001923745.2  49.813  267 134  0  47  313  274  540
## 6695 NP_001349068.1 XP_001923745.2  50.376  266 132  0  50  315   81  346
## 6696 NP_001349068.1 XP_001923745.2  46.341  287 150  2  58  340  257  543
## 6697 NP_001349068.1 XP_001923745.2  50.198  253 126  0  58  310  481  733
## 6698 NP_001349068.1 XP_001923745.2  50.388  258 128  0  58  315  201  458
## 6699 NP_001349068.1 XP_001923745.2  48.881  268 137  0  46  313  161  428
## 6700 NP_001349068.1 XP_001923745.2  48.828  256 131  0  58  313  509  764
## 6701 NP_001349068.1 XP_001923745.2  49.434  265 133  1  50  313   52  316
## 6702 NP_001349068.1 XP_001923745.2  48.908  229 117  0  58  286  537  765
## 6703 NP_001349068.1 XP_001923745.2  48.404  188  96  1 144  330   63  250
## 6704 NP_001349068.1 XP_021331276.1  51.181  254 124  0  60  313  245  498
## 6705 NP_001349068.1 XP_021331276.1  48.689  267 137  0  49  315  318  584
## 6706 NP_001349068.1 XP_021331276.1  51.172  256 125  0  58  313  523  778
## 6707 NP_001349068.1 XP_021331276.1  48.828  256 131  0  60  315  105  360
## 6708 NP_001349068.1 XP_021331276.1  50.391  256 127  0  58  313  215  470
## 6709 NP_001349068.1 XP_021331276.1  49.603  252 127  0  60  311  469  720
## 6710 NP_001349068.1 XP_021331276.1  44.590  305 135  2  45  315  336  640
## 6711 NP_001349068.1 XP_021331276.1  48.496  266 137  0  48  313  121  386
## 6712 NP_001349068.1 XP_021331276.1  48.855  262 134  0  50  311  431  692
## 6713 NP_001349068.1 XP_021331276.1  49.225  258 131  0  58  315  495  752
## 6714 NP_001349068.1 XP_021331276.1  49.225  258 131  0  58  315  271  528
## 6715 NP_001349068.1 XP_021331276.1  48.062  258 134  0  58  315  299  556
## 6716 NP_001349068.1 XP_021331276.1  45.896  268 145  0  48  315  401  668
## 6717 NP_001349068.1 XP_021331276.1  48.837  258 132  0  58  315  187  444
## 6718 NP_001349068.1 XP_021331276.1  50.000  200 100  0  58  257  607  806
## 6719 NP_001349068.1 XP_021331276.1  47.619  168  88  0 146  313   79  246
## 6720 NP_001349068.1 XP_021331276.1  45.223  157  78  1 167  315   64  220
## 6721 NP_001349068.1 XP_021331276.1  41.667  132  76  1 203  333   80  211
## 6722 NP_001349068.1 XP_021330441.1  54.321  243 111  0  69  311   14  256
## 6723 NP_001349068.1 XP_021330441.1  50.781  256 126  0  58  313   59  314
## 6724 NP_001349068.1 XP_021330441.1  48.908  229 117  0  58  286   87  315
## 6725 NP_001349068.1 XP_021330441.1  51.323  189  92  0 125  313   14  202
## 6726 NP_001349068.1 XP_021330441.1  51.240  121  58  1 211  330   16  136
## 6727 NP_001349068.1 XP_021330441.1  48.000   50  26  0 266  315   15   64
## 6728 NP_001349068.1 XP_021330455.1  48.881  268 137  0  48  315   92  359
## 6729 NP_001349068.1 XP_021330455.1  47.955  269 140  0  45  313  117  385
## 6730 NP_001349068.1 XP_021330455.1  47.126  261 138  0  58  318  158  418
## 6731 NP_001349068.1 XP_021330455.1  47.638  254 133  0  58  311  186  439
```

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## 6732 NP_001349068.1 XP_021330455.1  46.792  265 140  1  50  313   65  329
## 6733 NP_001349068.1 XP_021330455.1  46.332  259 139  0  58  316  242  500
## 6734 NP_001349068.1 XP_021330455.1  42.230  296 143  1  46  313  258  553
## 6735 NP_001349068.1 XP_021330455.1  39.860  286 170  1  33  316  187  472
## 6736 NP_001349068.1 XP_021330455.1  48.000  200 104  0 120  319   80  279
## 6737 NP_001349068.1 XP_021330454.1  48.881  268 137  0  48  315   92  359
## 6738 NP_001349068.1 XP_021330454.1  47.955  269 140  0  45  313  117  385
## 6739 NP_001349068.1 XP_021330454.1  47.126  261 138  0  58  318  158  418
## 6740 NP_001349068.1 XP_021330454.1  47.638  254 133  0  58  311  186  439
## 6741 NP_001349068.1 XP_021330454.1  46.792  265 140  1  50  313   65  329
## 6742 NP_001349068.1 XP_021330454.1  46.332  259 139  0  58  316  242  500
## 6743 NP_001349068.1 XP_021330454.1  42.230  296 143  1  46  313  258  553
## 6744 NP_001349068.1 XP_021330454.1  39.860  286 170  1  33  316  187  472
## 6745 NP_001349068.1 XP_021330454.1  48.000  200 104  0 120  319   80  279
## 6746 NP_001349068.1 XP_021331458.1  50.187  267 132  1  50  315   21  287
## 6747 NP_001349068.1 XP_021331458.1  51.172  256 125  0  58  313   58  313
## 6748 NP_001349068.1 XP_021331458.1  49.345  229 116  0  58  286   86  314
## 6749 NP_001349068.1 XP_021331458.1  43.678  174  96  1  33  204  143  316
## 6750 NP_001349068.1 XP_021331156.1  51.071  280 132  1  40  319 1091 1365
## 6751 NP_001349068.1 XP_021331156.1  51.163  258 126  0  58  315 1076 1333
## 6752 NP_001349068.1 XP_021331156.1  52.510  259 122  1  58  316  321  578
## 6753 NP_001349068.1 XP_021331156.1  50.781  256 126  0  58  313  992 1247
## 6754 NP_001349068.1 XP_021331156.1  50.370  270 134  0  46  315  952 1221
## 6755 NP_001349068.1 XP_021331156.1  50.775  258 126  1  58  315  293  549
## 6756 NP_001349068.1 XP_021331156.1  47.653  277 144  1  58  333  181  457
## 6757 NP_001349068.1 XP_021331156.1  48.736  277 141  1  58  333  237  513
## 6758 NP_001349068.1 XP_021331156.1  51.163  258 126  0  58  315  209  466
## 6759 NP_001349068.1 XP_021331156.1  47.059  289 152  1  46  333 1036 1324
## 6760 NP_001349068.1 XP_021331156.1  50.388  258 128  0  58  315 1020 1277
## 6761 NP_001349068.1 XP_021331156.1  50.000  258 129  0  58  315  684  941
## 6762 NP_001349068.1 XP_021331156.1  49.813  267 133  1  50  315 1375 1641
## 6763 NP_001349068.1 XP_021331156.1  50.775  258 127  0  58  315  628  885
## 6764 NP_001349068.1 XP_021331156.1  50.965  259 126  1  58  315 1411 1669
## 6765 NP_001349068.1 XP_021331156.1  50.388  258 128  0  58  315  153  410
## 6766 NP_001349068.1 XP_021331156.1  49.104  279 137  1  38  316  921 1194
## 6767 NP_001349068.1 XP_021331156.1  42.442  344 140  3  29  315 1243 1585
## 6768 NP_001349068.1 XP_021331156.1  49.225  258 131  0  58  315  600  857
## 6769 NP_001349068.1 XP_021331156.1  50.000  256 128  0  60  315  267  522
## 6770 NP_001349068.1 XP_021331156.1  51.575  254 122  1  58  311 1132 1384
## 6771 NP_001349068.1 XP_021331156.1  50.000  258 129  0  58  315  544  801
## 6772 NP_001349068.1 XP_021331156.1  47.407  270 142  0  46  315  812 1081
## 6773 NP_001349068.1 XP_021331156.1  44.599  287 159  0  29  315  627  913
## 6774 NP_001349068.1 XP_021331156.1  47.368  266 140  0  50  315  900 1165
## 6775 NP_001349068.1 XP_021331156.1  45.487  277 150  1  58  333  125  401
## 6776 NP_001349068.1 XP_021331156.1  48.450  258 133  0  58  315  768 1025
## 6777 NP_001349068.1 XP_021331156.1  48.450  258 133  0  58  315  572  829
## 6778 NP_001349068.1 XP_021331156.1  45.865  266 144  0  50  315  732  997
## 6779 NP_001349068.1 XP_021331156.1  48.062  258 134  0  58  315  880 1137
## 6780 NP_001349068.1 XP_021331156.1  47.287  258 136  0  58  315   97  354
## 6781 NP_001349068.1 XP_021331156.1  48.263  259 133  1  58  316  517  774
## 6782 NP_001349068.1 XP_021331156.1  45.312  256 140  0  60  315   71  326
## 6783 NP_001349068.1 XP_021331156.1  44.664  253 140  0  63  315   46  298
## 6784 NP_001349068.1 XP_021331156.1  46.502  243 129  1  49  290 1430 1672
## 6785 NP_001349068.1 XP_021331156.1  37.864  206 119  2 108  313   16  212
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## 6786 NP_001349068.1 XP_021331333.1  50.746  268 132  0  48  315  532  799
## 6787 NP_001349068.1 XP_021331333.1  50.350  286 141  1  46  330  614  899
## 6788 NP_001349068.1 XP_021331333.1  52.692  260 123  0  56  315  568  827
## 6789 NP_001349068.1 XP_021331333.1  51.311  267 130  0  49  315  673  939
## 6790 NP_001349068.1 XP_021331333.1  53.077  260 122  0  56  315  764 1023
## 6791 NP_001349068.1 XP_021331333.1  52.692  260 123  0  56  315  456  715
## 6792 NP_001349068.1 XP_021331333.1  51.938  258 124  0  58  315  262  519
## 6793 NP_001349068.1 XP_021331333.1  51.095  274 133  1  58  330  234  507
## 6794 NP_001349068.1 XP_021331333.1  51.538  260 126  0  56  315  428  687
## 6795 NP_001349068.1 XP_021331333.1  52.713  258 122  0  58  315  598  855
## 6796 NP_001349068.1 XP_021331333.1  51.923  260 125  0  56  315  708  967
## 6797 NP_001349068.1 XP_021331333.1  51.923  260 125  0  56  315  316  575
## 6798 NP_001349068.1 XP_021331333.1  51.923  260 125  0  56  315  288  547
## 6799 NP_001349068.1 XP_021331333.1  51.923  260 125  0  56  315  736  995
## 6800 NP_001349068.1 XP_021331333.1  51.163  258 126  0  56  313  176  433
## 6801 NP_001349068.1 XP_021331333.1  50.385  260 129  0  56  315  512  771
## 6802 NP_001349068.1 XP_021331333.1  50.385  260 129  0  56  315  344  603
## 6803 NP_001349068.1 XP_021331333.1  51.538  260 126  0  56  315  400  659
## 6804 NP_001349068.1 XP_021331333.1  49.231  260 132  0  56  315  148  407
## 6805 NP_001349068.1 XP_021331333.1  48.913  276 140  1  56  330  204  479
## 6806 NP_001349068.1 XP_021331333.1  50.000  260 130  0  56  315  372  631
## 6807 NP_001349068.1 XP_021331333.1  50.000  260 130  0  56  315  792 1051
## 6808 NP_001349068.1 XP_021331333.1  50.198  253 126  0  63  315  127  379
## 6809 NP_001349068.1 XP_021331333.1  49.027  257 131  0  59  315   95  351
## 6810 NP_001349068.1 XP_021331333.1  49.603  252 127  0  56  307  820 1071
## 6811 NP_001349068.1 XP_021331333.1  45.703  256 139  0  60  315   68  323
## 6812 NP_001349068.1 XP_021331333.1  41.077  297 148  3  39  315    6  295
## 6813 NP_001349068.1 XP_021331333.1  43.523  193 105  1 124  316   52  240
## 6814 NP_001349068.1 XP_021330715.1  51.311  267 130  0  49  315  947 1213
## 6815 NP_001349068.1 XP_021330715.1  53.846  260 120  0  56  315  786 1045
## 6816 NP_001349068.1 XP_021330715.1  54.724  254 115  0  60  313  286  539
## 6817 NP_001349068.1 XP_021330715.1  46.104  308 165  1  27  333  897 1204
## 6818 NP_001349068.1 XP_021330715.1  52.692  260 123  0  56  315  870 1129
## 6819 NP_001349068.1 XP_021330715.1  52.107  261 125  0  56  316  982 1242
## 6820 NP_001349068.1 XP_021330715.1  52.692  260 123  0  56  315  842 1101
## 6821 NP_001349068.1 XP_021330715.1  47.195  303 152  2  21  315   43  345
## 6822 NP_001349068.1 XP_021330715.1  52.308  260 124  0  56  315  674  933
## 6823 NP_001349068.1 XP_021330715.1  52.692  260 123  0  56  315  142  401
## 6824 NP_001349068.1 XP_021330715.1  50.187  267 133  0  49  315  891 1157
## 6825 NP_001349068.1 XP_021330715.1  52.326  258 123  0  58  315  648  905
## 6826 NP_001349068.1 XP_021330715.1  52.490  261 124  0  56  316  814 1074
## 6827 NP_001349068.1 XP_021330715.1  51.311  267 130  0  49  315  695  961
## 6828 NP_001349068.1 XP_021330715.1  50.192  261 130  0  56  316   30  290
## 6829 NP_001349068.1 XP_021330715.1  52.652  264 125  0  56  319  226  489
## 6830 NP_001349068.1 XP_021330715.1  50.769  260 128  0  56  315  758 1017
## 6831 NP_001349068.1 XP_021330715.1  50.562  267 132  0  49  315  611  877
## 6832 NP_001349068.1 XP_021330715.1  48.936  282 143  1  50  330  724 1005
## 6833 NP_001349068.1 XP_021330715.1  51.538  260 126  0  56  315  198  457
## 6834 NP_001349068.1 XP_021330715.1  50.000  260 130  0  56  315  170  429
## 6835 NP_001349068.1 XP_021330715.1  48.302  265 137  0  50  314  332  596
## 6836 NP_001349068.1 XP_021330715.1  48.364  275 141  1  56  329  366  640
## 6837 NP_001349068.1 XP_021330715.1  49.231  260 132  0  56  315  590  849
## 6838 NP_001349068.1 XP_021330715.1  49.270  274 138  1  58  330  564  837
## 6839 NP_001349068.1 XP_021330715.1  50.781  256 125  1  56  311 1010 1264
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## 6840 NP_001349068.1 XP_021330715.1  47.670  279 145  1  56  333  422  700
## 6841 NP_001349068.1 XP_021330715.1  48.077  260 135  0  56  315  450  709
## 6842 NP_001349068.1 XP_021330715.1  47.826  276 143  1  56  330  534  809
## 6843 NP_001349068.1 XP_021330715.1  48.846  260 133  0  56  315    2  261
## 6844 NP_001349068.1 XP_021330715.1  48.846  260 133  0  56  315  394  653
## 6845 NP_001349068.1 XP_021330715.1  46.377  276 147  1  56  330  506  781
## 6846 NP_001349068.1 XP_021330715.1  47.287  258 135  1  56  313 1094 1350
## 6847 NP_001349068.1 XP_021330715.1  44.105  229 127  1  29  257 1123 1350
## 6848 NP_001349068.1 XP_021330715.1  50.769   65  32  0 251  315    1   65
## 6849 NP_001349068.1 XP_017211108.2  49.609  256 129  0  58  313  101  356
## 6850 NP_001349068.1 XP_017211108.2  47.410  251 132  0  63  313   78  328
## 6851 NP_001349068.1 XP_017211108.2  46.850  254 135  0  58  311  129  382
## 6852 NP_001349068.1 XP_017211108.2  44.531  256 138  2  58  313  185  436
## 6853 NP_001349068.1 XP_017211108.2  48.444  225 116  0  91  315   78  302
## 6854 NP_001349068.1 XP_017211108.2  48.214  168  87  0 146  313   77  244
## 6855 NP_001349068.1 XP_017211108.2  47.183  142  75  0 172  313   75  216
## 6856 NP_001349068.1 XP_021331415.1  52.326  258 123  0  58  315  121  378
## 6857 NP_001349068.1 XP_021331415.1  51.550  258 125  0  58  315   65  322
## 6858 NP_001349068.1 XP_021331415.1  51.550  258 125  0  58  315    9  266
## 6859 NP_001349068.1 XP_021331415.1  49.813  267 134  0  49  315  252  518
## 6860 NP_001349068.1 XP_021331415.1  51.550  258 125  0  58  315  149  406
## 6861 NP_001349068.1 XP_021331415.1  52.918  257 121  0  60  316   39  295
## 6862 NP_001349068.1 XP_021331415.1  52.344  256 122  0  60  315  319  574
## 6863 NP_001349068.1 XP_021331415.1  46.667  285 150  1  33  315  262  546
## 6864 NP_001349068.1 XP_021331415.1  47.292  277 145  1  58  333  205  481
## 6865 NP_001349068.1 XP_021331415.1  49.612  258 130  0  58  315  233  490
## 6866 NP_001349068.1 XP_021331415.1  51.562  256 124  0  60  315  403  658
## 6867 NP_001349068.1 XP_021331415.1  52.941  238 112  0  78  315    1  238
## 6868 NP_001349068.1 XP_021331415.1  46.809  282 122  1  59  312  430  711
## 6869 NP_001349068.1 XP_021331415.1  44.884  303 120  2  58  313  485  787
## 6870 NP_001349068.1 XP_021331415.1  45.909  220 100  1  58  258  569  788
## 6871 NP_001349068.1 XP_021331415.1  42.222   45  26  0  46   90  744  788
## 6872 NP_001349068.1 XP_021329614.1  50.368  272 134  1  42  312  457  728
## 6873 NP_001349068.1 XP_021329614.1  50.000  268 134  0  48  315  120  387
## 6874 NP_001349068.1 XP_021329614.1  46.996  283 150  0  28  310  128  410
## 6875 NP_001349068.1 XP_021329614.1  48.828  256 131  0  60  315  104  359
## 6876 NP_001349068.1 XP_021329614.1  48.120  266 138  0  50  315   66  331
## 6877 NP_001349068.1 XP_021329614.1  47.287  258 136  0  59  316   47  304
## 6878 NP_001349068.1 XP_021329614.1  42.244  303 139  3  50  316  346  648
## 6879 NP_001349068.1 XP_021329614.1  50.000  228 114  0  88  315  476  703
## 6880 NP_001349068.1 XP_021329614.1  47.234  235 124  0  81  315   41  275
## 6881 NP_001349068.1 XP_021329614.1  50.000   98  49  0  49  146  633  730
## 6882 NP_001349068.1 XP_021329614.1  42.500   40  23  0 276  315   40   79
## 6883 NP_001349068.1 XP_021331370.1  49.618  262 132  0  58  319    2  263
## 6884 NP_001349068.1 XP_021331370.1  49.600  250 126  0  58  307   30  279
## 6885 NP_001349068.1 XP_021331370.1  54.113  231 106  0  85  315    1  231
## 6886 NP_001349068.1 XP_017210945.1  47.766  291 150  2  42  330   44  334
## 6887 NP_001349068.1 XP_017210945.1  49.603  252 127  0  58  309   89  340
## 6888 NP_001349068.1 XP_021330459.1  51.341  261 123  1  60  316  386  646
## 6889 NP_001349068.1 XP_021330459.1  48.227  282 146  0  34  315  332  613
## 6890 NP_001349068.1 XP_021330459.1  50.566  265 127  1  56  316  410  674
## 6891 NP_001349068.1 XP_021330459.1  48.718  273 136  2  47  315  313  585
## 6892 NP_001349068.1 XP_021330459.1  50.579  259 124  1  60  314  442  700
## 6893 NP_001349068.1 XP_021330459.1  44.656  262 141  1  56  313   98  359
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## 6894 NP_001349068.1 XP_021330459.1  41.924  291 160  3  34  316   13  302
## 6895 NP_001349068.1 XP_021330459.1  43.233  266 151  0  48  313   62  327
## 6896 NP_001349068.1 XP_021330459.1  38.636   88  54  0 231  318   49  136
## 6897 NP_001349068.1 XP_021330459.1  40.909   44  26  0  46   89  656  699
## 6898 NP_001349068.1 XP_021330576.1  50.699  286 113  2  58  315 1133 1418
## 6899 NP_001349068.1 XP_021330576.1  52.510  259 123  0  58  316 1469 1727
## 6900 NP_001349068.1 XP_021330576.1  52.809  267 126  0  49  315 1404 1670
## 6901 NP_001349068.1 XP_021330576.1  53.488  258 120  0  58  315  489  746
## 6902 NP_001349068.1 XP_021330576.1  49.117  283 138  1  39  315  296  578
## 6903 NP_001349068.1 XP_021330576.1  53.101  258 121  0  58  315  433  690
## 6904 NP_001349068.1 XP_021330576.1  52.612  268 127  0  48  315 1291 1558
## 6905 NP_001349068.1 XP_021330576.1  52.326  258 123  0  58  315  657  914
## 6906 NP_001349068.1 XP_021330576.1  51.938  258 124  0  58  315  461  718
## 6907 NP_001349068.1 XP_021330576.1  51.825  274 131  1  58  330 1385 1658
## 6908 NP_001349068.1 XP_021330576.1  52.326  258 123  0  58  315  629  886
## 6909 NP_001349068.1 XP_021330576.1  49.635  274 137  1  58  330  377  650
## 6910 NP_001349068.1 XP_021330576.1  51.550  258 125  0  58  315  405  662
## 6911 NP_001349068.1 XP_021330576.1  51.938  258 124  0  58  315 1189 1446
## 6912 NP_001349068.1 XP_021330576.1  51.938  258 124  0  58  315  769 1026
## 6913 NP_001349068.1 XP_021330576.1  52.290  262 125  0  58  319 1329 1590
## 6914 NP_001349068.1 XP_021330576.1  50.391  256 127  0  58  313 1441 1696
## 6915 NP_001349068.1 XP_021330576.1  51.562  256 124  0  58  313 1021 1276
## 6916 NP_001349068.1 XP_021330576.1  51.938  258 124  0  58  315 1273 1530
## 6917 NP_001349068.1 XP_021330576.1  51.163  258 126  0  58  315  853 1110
## 6918 NP_001349068.1 XP_021330576.1  51.550  258 125  0  58  315  713  970
## 6919 NP_001349068.1 XP_021330576.1  52.713  258 122  0  58  315 1245 1502
## 6920 NP_001349068.1 XP_021330576.1  50.388  258 128  0  58  315  545  802
## 6921 NP_001349068.1 XP_021330576.1  51.163  258 126  0  58  315 1357 1614
## 6922 NP_001349068.1 XP_021330576.1  51.163  258 126  0  58  315  965 1222
## 6923 NP_001349068.1 XP_021330576.1  50.388  258 128  0  58  315 1077 1334
## 6924 NP_001349068.1 XP_021330576.1  50.193  259 129  0  58  316  601  859
## 6925 NP_001349068.1 XP_021330576.1  51.163  258 126  0  58  315  741  998
## 6926 NP_001349068.1 XP_021330576.1  49.438  267 135  0  49  315  564  830
## 6927 NP_001349068.1 XP_021330576.1  50.388  258 128  0  58  315 1049 1306
## 6928 NP_001349068.1 XP_021330576.1  50.775  258 127  0  58  315  797 1054
## 6929 NP_001349068.1 XP_021330576.1  50.388  258 128  0  58  315  825 1082
## 6930 NP_001349068.1 XP_021330576.1  50.388  258 128  0  58  315  881 1138
## 6931 NP_001349068.1 XP_021330576.1  50.000  258 129  0  58  315  937 1194
## 6932 NP_001349068.1 XP_021330576.1  49.225  258 131  0  58  315  993 1250
## 6933 NP_001349068.1 XP_021330576.1  49.219  256 129  1  58  313  294  548
## 6934 NP_001349068.1 XP_021330576.1  45.583  283 127  1  60  315   72  354
## 6935 NP_001349068.1 XP_021330576.1  45.455  286 154  1  33  316  882 1167
## 6936 NP_001349068.1 XP_021330576.1  41.853  313 127  2  58  315   98  410
## 6937 NP_001349068.1 XP_021330576.1  42.697  267 153  0  63  329   47  313
## 6938 NP_001349068.1 XP_021330576.1  48.684  228 117  0  58  285 1553 1780
## 6939 NP_001349068.1 XP_021330576.1  45.238  168  92  0 146  313   46  213
## 6940 NP_001349068.1 XP_017211205.2  49.438  267 135  0  49  315  164  430
## 6941 NP_001349068.1 XP_017211205.2  48.689  267 137  0  49  315  248  514
## 6942 NP_001349068.1 XP_017211205.2  49.438  267 135  0  49  315  444  710
## 6943 NP_001349068.1 XP_017211205.2  49.438  267 135  0  49  315  612  878
## 6944 NP_001349068.1 XP_017211205.2  47.552  286 122  1  58  315  285  570
## 6945 NP_001349068.1 XP_017211205.2  50.391  256 127  0  58  313  397  652
## 6946 NP_001349068.1 XP_017211205.2  50.584  257 127  0  60  316  231  487
## 6947 NP_001349068.1 XP_017211205.2  48.736  277 141  1  58  333  369  645
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## 6948 NP_001349068.1 XP_017211205.2  49.438  267 135  0  49  315  528  794
## 6949 NP_001349068.1 XP_017211205.2  47.761  268 140  0  48  315  667  934
## 6950 NP_001349068.1 XP_017211205.2  46.043  278 144  1  44  315  629  906
## 6951 NP_001349068.1 XP_017211205.2  49.609  256 129  0  60  315  511  766
## 6952 NP_001349068.1 XP_017211205.2  46.465  297 155  2  48  340   79  375
## 6953 NP_001349068.1 XP_017211205.2  47.292  277 145  1  58  333  425  701
## 6954 NP_001349068.1 XP_017211205.2  47.778  270 141  0  46  315  581  850
## 6955 NP_001349068.1 XP_017211205.2  47.445  274 143  1  58  330  145  418
## 6956 NP_001349068.1 XP_017211205.2  48.837  258 132  0  58  315  341  598
## 6957 NP_001349068.1 XP_017211205.2  45.578  294 158  2  42  333   44  337
## 6958 NP_001349068.1 XP_017211205.2  48.485  264 136  0  50  313  473  736
## 6959 NP_001349068.1 XP_017211205.2  50.644  233 115  0  58  290  705  937
## 6960 NP_001349068.1 XP_021331395.1  54.148  229 105  0  68  296    2  230
## 6961 NP_001349068.1 XP_021331395.1  50.226  221 110  0  95  315    1  221
## 6962 NP_001349068.1 XP_021331395.1  48.416  221 114  0  48  268   10  230
## 6963 NP_001349068.1 XP_021331105.1  51.103  272 132  1  49  319  211  482
## 6964 NP_001349068.1 XP_021331105.1  52.030  271 129  1  46  315  180  450
## 6965 NP_001349068.1 XP_021331105.1  51.049  286 112  1  58  315  473  758
## 6966 NP_001349068.1 XP_021331105.1  52.326  258 123  0  58  315  277  534
## 6967 NP_001349068.1 XP_021331105.1  48.344  302 127  2  58  330  361  662
## 6968 NP_001349068.1 XP_021331105.1  53.725  255 118  0  58  312  978 1232
## 6969 NP_001349068.1 XP_021331105.1  51.163  258 126  0  58  315  922 1179
## 6970 NP_001349068.1 XP_021331105.1  52.326  258 123  0  58  315  249  506
## 6971 NP_001349068.1 XP_021331105.1  51.351  259 126  0  58  316  305  563
## 6972 NP_001349068.1 XP_021331105.1  52.713  258 122  0  58  315  417  674
## 6973 NP_001349068.1 XP_021331105.1  52.344  256 122  0  60  315  840 1095
## 6974 NP_001349068.1 XP_021331105.1  52.326  258 123  0  58  315  894 1151
## 6975 NP_001349068.1 XP_021331105.1  51.737  259 124  1  58  315  809 1067
## 6976 NP_001349068.1 XP_021331105.1  51.172  256 125  0  58  313  585  840
## 6977 NP_001349068.1 XP_021331105.1  50.388  258 128  0  58  315  557  814
## 6978 NP_001349068.1 XP_021331105.1  50.973  257 126  0  59  315  951 1207
## 6979 NP_001349068.1 XP_021331105.1  51.550  258 123  1  58  313 1034 1291
## 6980 NP_001349068.1 XP_021331105.1  50.388  258 128  0  58  315  333  590
## 6981 NP_001349068.1 XP_021331105.1  47.842  278 125  2  58  315    5  282
## 6982 NP_001349068.1 XP_021331105.1  51.082  231 111  1  58  286 1062 1292
## 6983 NP_001349068.1 XP_021331105.1  47.638  254 113  2  82  315    1  254
## 6984 NP_001349068.1 XP_021331312.1  49.027  257 131  0  57  313    1  257
## 6985 NP_001349068.1 XP_017210993.2  51.562  256 124  0  58  313   58  313
## 6986 NP_001349068.1 XP_017210993.2  49.811  265 132  1  50  313   21  285
## 6987 NP_001349068.1 XP_017210993.2  46.058  241 130  0  46  286   74  314
## 6988 NP_001349068.1 XP_017210993.2  48.404  188  96  1 144  330   32  219
## 6989 NP_001349068.1 XP_021331234.1  51.953  256 123  0  58  313   76  331
## 6990 NP_001349068.1 XP_021331234.1  46.304  257 137  1  58  314  160  415
## 6991 NP_001349068.1 XP_021331234.1  47.547  265 138  1  50  313   39  303
## 6992 NP_001349068.1 XP_021331234.1  42.960  277 158  0  58  334  132  408
## 6993 NP_001349068.1 XP_021331234.1  48.148  216 111  1 119  333   53  268
## 6994 NP_001349068.1 XP_021331169.1  53.488  258 120  0  58  315  201  458
## 6995 NP_001349068.1 XP_021331169.1  51.163  258 126  0  58  315   33  290
## 6996 NP_001349068.1 XP_021331169.1  51.172  256 125  0  60  315    7  262
## 6997 NP_001349068.1 XP_021331169.1  53.101  258 121  0  58  315  341  598
## 6998 NP_001349068.1 XP_021331169.1  53.488  258 120  0  58  315  257  514
## 6999 NP_001349068.1 XP_021331169.1  51.953  256 123  0  60  315  175  430
## 7000 NP_001349068.1 XP_021331169.1  51.838  272 130  1  60  330  315  586
## 7001 NP_001349068.1 XP_021331169.1  49.225  258 131  0  58  315  117  374
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## 7002 NP_001349068.1 XP_021331169.1  50.193  259 129  0  58  316   61  319
## 7003 NP_001349068.1 XP_021331169.1  49.612  258 130  0  58  315   89  346
## 7004 NP_001349068.1 XP_021331169.1  47.368  285 148  1  33  315  258  542
## 7005 NP_001349068.1 XP_021331169.1  49.225  258 131  0  58  315  145  402
## 7006 NP_001349068.1 XP_021331169.1  50.781  256 126  0  58  313  425  680
## 7007 NP_001349068.1 XP_021331169.1  51.709  234 113  0  82  315    1  234
## 7008 NP_001349068.1 XP_021331169.1  50.388  258 128  0  58  315  369  626
## 7009 NP_001349068.1 XP_021331169.1  49.621  264 133  0  50  313  389  652
## 7010 NP_001349068.1 XP_021331169.1  49.718  177  89  0 140  316    3  179
## 7011 NP_001349068.1 XP_021331211.1  48.421  285 143  2  60  340  608  892
## 7012 NP_001349068.1 XP_021331211.1  52.326  258 123  0  58  315  354  611
## 7013 NP_001349068.1 XP_021331211.1  49.291  282 115  1  60  313  496  777
## 7014 NP_001349068.1 XP_021331211.1  48.571  280 143  1  58  336  662  941
## 7015 NP_001349068.1 XP_021331211.1  51.550  258 125  0  58  315  550  807
## 7016 NP_001349068.1 XP_021331211.1  50.388  258 128  0  58  315  382  639
## 7017 NP_001349068.1 XP_021331211.1  50.000  256 128  0  58  313  578  833
## 7018 NP_001349068.1 XP_021331211.1  50.775  258 127  0  58  315  326  583
## 7019 NP_001349068.1 XP_021331211.1  49.421  259 131  0  58  316  410  668
## 7020 NP_001349068.1 XP_021331211.1  47.826  276 143  1  40  315   29  303
## 7021 NP_001349068.1 XP_021331211.1  48.188  276 142  1  40  315  281  555
## 7022 NP_001349068.1 XP_021331211.1  50.781  256 126  0  60  315  244  499
## 7023 NP_001349068.1 XP_021331211.1  49.225  258 131  0  58  315  466  723
## 7024 NP_001349068.1 XP_021331211.1  48.881  268 137  0  38  305  670  937
## 7025 NP_001349068.1 XP_021331211.1  50.388  258 128  0  58  315  270  527
## 7026 NP_001349068.1 XP_021331211.1  50.391  256 127  0  58  313  158  413
## 7027 NP_001349068.1 XP_021331211.1  49.248  266 135  0  50  315   10  275
## 7028 NP_001349068.1 XP_021331211.1  50.391  256 127  0  58  313  102  357
## 7029 NP_001349068.1 XP_021331211.1  49.612  258 130  0  58  315   74  331
## 7030 NP_001349068.1 XP_021331211.1  47.810  274 142  1  58  330  438  711
## 7031 NP_001349068.1 XP_021331211.1  49.219  256 130  0  58  313  214  469
## 7032 NP_001349068.1 XP_021331211.1  45.296  287 153  2  58  340  186  472
## 7033 NP_001349068.1 XP_021331211.1  50.407  246 122  0  70  315    2  247
## 7034 NP_001349068.1 XP_021331211.1  49.309  217 110  0  97  313    1  217
## 7035 NP_001349068.1 XP_021330549.1  47.387  287 123  1  58  316   78  364
## 7036 NP_001349068.1 XP_021330549.1  49.421  259 131  0  58  316   50  308
## 7037 NP_001349068.1 XP_021330549.1  51.982  227 109  0  85  311   49  275
## 7038 NP_001349068.1 XP_021330549.1  44.170  283 128  2  58  310  106  388
## 7039 NP_001349068.1 XP_021330549.1  52.683  205  97  0 112  316   48  252
## 7040 NP_001349068.1 XP_021330549.1  44.048   84  46  1 251  333   47  130
## 7041 NP_001349068.1 XP_021330548.1  47.387  287 123  1  58  316   78  364
## 7042 NP_001349068.1 XP_021330548.1  49.421  259 131  0  58  316   50  308
## 7043 NP_001349068.1 XP_021330548.1  51.982  227 109  0  85  311   49  275
## 7044 NP_001349068.1 XP_021330548.1  44.170  283 128  2  58  310  106  388
## 7045 NP_001349068.1 XP_021330548.1  52.683  205  97  0 112  316   48  252
## 7046 NP_001349068.1 XP_021330548.1  44.048   84  46  1 251  333   47  130
## 7047 NP_001349068.1 XP_017210088.1  47.387  287 123  1  58  316   78  364
## 7048 NP_001349068.1 XP_017210088.1  49.421  259 131  0  58  316   50  308
## 7049 NP_001349068.1 XP_017210088.1  51.982  227 109  0  85  311   49  275
## 7050 NP_001349068.1 XP_017210088.1  44.170  283 128  2  58  310  106  388
## 7051 NP_001349068.1 XP_017210088.1  52.683  205  97  0 112  316   48  252
## 7052 NP_001349068.1 XP_017210088.1  44.048   84  46  1 251  333   47  130
## 7053 NP_001349068.1 XP_021330547.1  47.387  287 123  1  58  316   78  364
## 7054 NP_001349068.1 XP_021330547.1  49.421  259 131  0  58  316   50  308
## 7055 NP_001349068.1 XP_021330547.1  51.982  227 109  0  85  311   49  275
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## 7056 NP_001349068.1 XP_021330547.1  44.170  283 128  2  58  310  106  388
## 7057 NP_001349068.1 XP_021330547.1  52.683  205  97  0 112  316   48  252
## 7058 NP_001349068.1 XP_021330547.1  44.048   84  46  1 251  333   47  130
## 7059 NP_001349068.1 XP_021331218.1  48.507  268 137  1  50  316  101  368
## 7060 NP_001349068.1 XP_021331218.1  49.213  254 129  0  60  313  140  393
## 7061 NP_001349068.1 XP_021331218.1  47.368  247 126  2  69  315   97  339
## 7062 NP_001349068.1 XP_021331218.1  48.246  228 118  0  58  285  166  393
## 7063 NP_001349068.1 XP_021327002.1  50.000  254 126  1  59  311   45  298
## 7064 NP_001349068.1 XP_021327002.1  47.436  234 123  0  80  313   39  272
## 7065 NP_001349068.1 XP_021327002.1  51.010  198  97  0  58  255  101  298
## 7066 NP_001349068.1 XP_021327002.1  49.342  152  77  0 164  315   39  190
## 7067 NP_001349068.1 XP_021327002.1  45.361   97  53  0 220  316   39  135
## 7068 NP_001349068.1 XP_021327001.1  50.000  254 126  1  59  311   45  298
## 7069 NP_001349068.1 XP_021327001.1  47.436  234 123  0  80  313   39  272
## 7070 NP_001349068.1 XP_021327001.1  51.010  198  97  0  58  255  101  298
## 7071 NP_001349068.1 XP_021327001.1  49.342  152  77  0 164  315   39  190
## 7072 NP_001349068.1 XP_021327001.1  45.361   97  53  0 220  316   39  135
## 7073 NP_001349068.1 XP_021327000.1  50.000  254 126  1  59  311   45  298
## 7074 NP_001349068.1 XP_021327000.1  47.436  234 123  0  80  313   39  272
## 7075 NP_001349068.1 XP_021327000.1  51.010  198  97  0  58  255  101  298
## 7076 NP_001349068.1 XP_021327000.1  49.342  152  77  0 164  315   39  190
## 7077 NP_001349068.1 XP_021327000.1  45.361   97  53  0 220  316   39  135
## 7078 NP_001349068.1 XP_021326999.1  50.000  254 126  1  59  311   45  298
## 7079 NP_001349068.1 XP_021326999.1  47.436  234 123  0  80  313   39  272
## 7080 NP_001349068.1 XP_021326999.1  51.010  198  97  0  58  255  101  298
## 7081 NP_001349068.1 XP_021326999.1  49.342  152  77  0 164  315   39  190
## 7082 NP_001349068.1 XP_021326999.1  45.361   97  53  0 220  316   39  135
## 7083 NP_001349068.1 XP_021330541.1  50.000  254 126  1  59  311   45  298
## 7084 NP_001349068.1 XP_021330541.1  47.436  234 123  0  80  313   39  272
## 7085 NP_001349068.1 XP_021330541.1  51.010  198  97  0  58  255  101  298
## 7086 NP_001349068.1 XP_021330541.1  49.342  152  77  0 164  315   39  190
## 7087 NP_001349068.1 XP_021330541.1  45.361   97  53  0 220  316   39  135
## 7088 NP_001349068.1 XP_021330540.1  50.000  254 126  1  59  311   45  298
## 7089 NP_001349068.1 XP_021330540.1  47.436  234 123  0  80  313   39  272
## 7090 NP_001349068.1 XP_021330540.1  51.010  198  97  0  58  255  101  298
## 7091 NP_001349068.1 XP_021330540.1  49.342  152  77  0 164  315   39  190
## 7092 NP_001349068.1 XP_021330540.1  45.361   97  53  0 220  316   39  135
## 7093 NP_001349068.1 XP_021330539.1  50.000  254 126  1  59  311   45  298
## 7094 NP_001349068.1 XP_021330539.1  47.436  234 123  0  80  313   39  272
## 7095 NP_001349068.1 XP_021330539.1  51.010  198  97  0  58  255  101  298
## 7096 NP_001349068.1 XP_021330539.1  49.342  152  77  0 164  315   39  190
## 7097 NP_001349068.1 XP_021330539.1  45.361   97  53  0 220  316   39  135
## 7098 NP_001349068.1 XP_021330538.1  50.000  254 126  1  59  311   45  298
## 7099 NP_001349068.1 XP_021330538.1  47.436  234 123  0  80  313   39  272
## 7100 NP_001349068.1 XP_021330538.1  51.010  198  97  0  58  255  101  298
## 7101 NP_001349068.1 XP_021330538.1  49.342  152  77  0 164  315   39  190
## 7102 NP_001349068.1 XP_021330538.1  45.361   97  53  0 220  316   39  135
## 7103 NP_001349068.1 XP_021331122.1  50.973  257 125  1  58  313  303  559
## 7104 NP_001349068.1 XP_021331122.1  52.124  259 123  1  58  315   79  337
## 7105 NP_001349068.1 XP_021331122.1  49.438  267 134  1  50  315   42  308
## 7106 NP_001349068.1 XP_021331122.1  51.822  247 118  1  88  333   53  299
## 7107 NP_001349068.1 XP_021331122.1  46.341  246 132  0  40  285  314  559
## 7108 NP_001349068.1 XP_021331122.1  47.368  228 120  0  49  276  351  578
## 7109 NP_001349068.1 XP_017211155.1  50.000  254 127  0  60  313   91  344
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## 7110 NP_001349068.1 XP_017211155.1  48.134  268 138  1  50  316   52  319
## 7111 NP_001349068.1 XP_017211155.1  46.964  247 127  2  69  315   48  290
## 7112 NP_001349068.1 XP_017211155.1  48.246  228 118  0  58  285  117  344
## 7113 NP_001349068.1 XP_021331430.1  50.000  254 127  0  58  311    5  258
## 7114 NP_001349068.1 XP_021331430.1  48.828  256 131  0  58  313   33  288
## 7115 NP_001349068.1 XP_021331430.1  52.991  234 110  0  82  315    1  234
## 7116 NP_001349068.1 XP_021331430.1  47.191  267 139  1  49  313   52  318
## 7117 NP_001349068.1 XP_021331430.1  43.023  258 143  2  33  286   62  319
## 7118 NP_001349068.1 XP_017210515.1  51.515  264 128  0  50  313   81  344
## 7119 NP_001349068.1 XP_017210515.1  49.057  265 134  1  50  313   52  316
## 7120 NP_001349068.1 XP_017210515.1  47.598  229 120  0  58  286  117  345
## 7121 NP_001349068.1 XP_017210515.1  49.468  188  94  1 144  330   63  250
## 7122 NP_001349068.1 XP_021330710.1  51.515  264 128  0  50  313   81  344
## 7123 NP_001349068.1 XP_021330710.1  46.801  297 153  3  50  341   52  348
## 7124 NP_001349068.1 XP_017211069.1  50.000  254 127  0  60  313   91  344
## 7125 NP_001349068.1 XP_017211069.1  48.134  268 138  1  50  316   52  319
## 7126 NP_001349068.1 XP_017211069.1  46.964  247 127  2  69  315   48  290
## 7127 NP_001349068.1 XP_017211069.1  48.684  228 117  0  58  285  117  344
## 7128 NP_001349068.1 XP_021327018.1  47.387  287 123  1  58  316   78  364
## 7129 NP_001349068.1 XP_021327018.1  49.807  259 130  0  58  316   50  308
## 7130 NP_001349068.1 XP_021327018.1  51.982  227 109  0  85  311   49  275
## 7131 NP_001349068.1 XP_021327018.1  44.170  283 128  2  58  310  106  388
## 7132 NP_001349068.1 XP_021327018.1  53.171  205  96  0 112  316   48  252
## 7133 NP_001349068.1 XP_021327018.1  45.238   84  45  1 251  333   47  130
## 7134 NP_001349068.1 XP_021331407.1  45.426  317 141  3  28  315  383  696
## 7135 NP_001349068.1 XP_021331407.1  51.562  256 124  0  58  313  635  890
## 7136 NP_001349068.1 XP_021331407.1  48.014  277 143  1  58  333  607  883
## 7137 NP_001349068.1 XP_021331407.1  45.631  309 117  1  58  315  528  836
## 7138 NP_001349068.1 XP_021331407.1  47.440  293 128  2  49  315  376  668
## 7139 NP_001349068.1 XP_021331407.1  42.073  328 155  3  59  351  274  601
## 7140 NP_001349068.1 XP_021331407.1  43.243  259 147  0  58  316  105  363
## 7141 NP_001349068.1 XP_021331407.1  45.382  249 136  0  63  311   82  330
## 7142 NP_001349068.1 XP_021331407.1  43.233  266 151  0  48  313  123  388
## 7143 NP_001349068.1 XP_021331407.1  48.000  225 117  0  91  315   82  306
## 7144 NP_001349068.1 NP_001104625.1  51.136  264 129  0  50  313   81  344
## 7145 NP_001349068.1 NP_001104625.1  49.057  265 134  1  50  313   52  316
## 7146 NP_001349068.1 NP_001104625.1  47.162  229 121  0  58  286  117  345
## 7147 NP_001349068.1 NP_001104625.1  49.468  188  94  1 144  330   63  250
## 7148 NP_001349068.1 XP_021331389.1  45.031  322 170  4  25  341   28  347
## 7149 NP_001349068.1 XP_001336870.2  51.550  258 125  0  58  315   16  273
## 7150 NP_001349068.1 XP_001336870.2  46.454  282 123  1  58  311  100  381
## 7151 NP_001349068.1 XP_001336870.2  48.638  257 132  0  58  314   72  328
## 7152 NP_001349068.1 XP_001336870.2  47.222  252 133  0  58  309  212  463
## 7153 NP_001349068.1 XP_001336870.2  49.362  235 119  0  81  315   11  245
## 7154 NP_001349068.1 XP_001336870.2  45.926  270 142  1  58  327  156  421
## 7155 NP_001349068.1 XP_001336870.2  33.333   96  59  1  23  113  368  463
## 7156 NP_001349068.1 XP_021331277.1  44.944  267 147  0  50  316  131  397
## 7157 NP_001349068.1 XP_021331277.1  47.490  259 130  1  63  315   82  340
## 7158 NP_001349068.1 XP_021331277.1  43.478  276 150  1  45  314  148  423
## 7159 NP_001349068.1 XP_021331277.1  46.185  249 134  0  63  311  116  364
## 7160 NP_001349068.1 XP_021331277.1  47.727  176  86  1 146  315   81  256
## 7161 NP_001349068.1 XP_021331277.1  46.622  148  73  1 172  313   79  226
## 7162 NP_001349068.1 XP_017211018.1  49.606  254 128  0  60  313   91  344
## 7163 NP_001349068.1 XP_017211018.1  48.134  268 138  1  50  316   52  319
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## 7164 NP_001349068.1 XP_017211018.1  46.964  247 127  2  69  315   48  290
## 7165 NP_001349068.1 XP_017211018.1  48.246  228 118  0  58  285  117  344
## 7166 NP_001349068.1 XP_021329613.1  49.071  269 137  0  48  316  808 1076
## 7167 NP_001349068.1 XP_021329613.1  50.370  270 133  1  42  310  457  726
## 7168 NP_001349068.1 XP_021329613.1  50.000  268 134  0  48  315  120  387
## 7169 NP_001349068.1 XP_021329613.1  48.881  268 137  0  49  316  837 1104
## 7170 NP_001349068.1 XP_021329613.1  46.996  283 150  0  28  310  128  410
## 7171 NP_001349068.1 XP_021329613.1  51.172  256 125  0  58  313  902 1157
## 7172 NP_001349068.1 XP_021329613.1  48.828  256 131  0  60  315  104  359
## 7173 NP_001349068.1 XP_021329613.1  48.263  259 134  0  58  316  874 1132
## 7174 NP_001349068.1 XP_021329613.1  48.120  266 138  0  50  315   66  331
## 7175 NP_001349068.1 XP_021329613.1  46.595  279 148  1  39  316  770 1048
## 7176 NP_001349068.1 XP_021329613.1  47.287  258 136  0  59  316   47  304
## 7177 NP_001349068.1 XP_021329613.1  42.244  303 139  3  50  316  346  648
## 7178 NP_001349068.1 XP_021329613.1  50.000  228 114  0  88  315  476  703
## 7179 NP_001349068.1 XP_021329613.1  47.234  235 124  0  81  315   41  275
## 7180 NP_001349068.1 XP_021329613.1  42.268   97  56  0  49  145 1089 1185
## 7181 NP_001349068.1 XP_021329613.1  42.500   40  23  0 276  315   40   79
## 7182 NP_001349068.1 XP_017211199.1  54.709  223 101  0  70  292    2  224
## 7183 NP_001349068.1 XP_017211199.1  50.228  219 109  0  97  315    1  219
## 7184 NP_001349068.1 XP_017211199.1  48.387  217 112  0  48  264    8  224
## 7185 NP_001349068.1 XP_009299198.1  47.388  268 141  0  48  315  123  390
## 7186 NP_001349068.1 XP_009299198.1  46.875  256 136  0  56  311  159  414
## 7187 NP_001349068.1 XP_009299198.1  47.410  251 132  0  63  313   82  332
## 7188 NP_001349068.1 XP_009299198.1  43.701  254 143  0  60  313  107  360
## 7189 NP_001349068.1 XP_009299198.1  41.573  267 156  0  48  314  207  473
## 7190 NP_001349068.1 XP_009299198.1  41.799  189 109  1 146  333   81  269
## 7191 NP_001349068.1 XP_009299198.1  43.972  141  79  0 172  312   79  219
## 7192 NP_001349068.1 NP_001107078.1  44.371  302 161  2  18  312   13  314
## 7193 NP_001349068.1 NP_001107078.1  49.378  241 122  0  50  290   80  320
## 7194 NP_001349068.1 NP_001107078.1  48.696  230 118  0  86  315   60  289
## 7195 NP_001349068.1 NP_001107078.1  49.655  145  73  0 175  319   65  209
## 7196 NP_001349068.1 XP_017210948.1  47.212  269 141  1  42  309   44  312
## 7197 NP_001349068.1 XP_017210948.1  52.282  241 114  1  91  330   66  306
## 7198 NP_001349068.1 XP_017210948.1  52.000  225 104  1  58  278   89  313
## 7199 NP_001349068.1 XP_021331497.1  48.106  264 137  0  50  313  115  378
## 7200 NP_001349068.1 XP_021331497.1  47.656  256 133  1  58  313  151  405
## 7201 NP_001349068.1 XP_021331497.1  47.410  251 132  0  63  313   72  322
## 7202 NP_001349068.1 XP_021331497.1  44.403  268 149  0  48  315   85  352
## 7203 NP_001349068.1 XP_021331497.1  43.952  248 139  0  72  319   53  300
## 7204 NP_001349068.1 XP_021331497.1  44.498  209 115  1  50  258  199  406
## 7205 NP_001349068.1 XP_021331497.1  45.161  155  84  1  50  204  255  408
## 7206 NP_001349068.1 XP_021331497.1  40.000   75  44  1  46  120  335  408
## 7207 NP_001349068.1 XP_021331371.1  49.194  248 126  0  58  305    1  248
## 7208 NP_001349068.1 XP_021331371.1  49.206  252 127  1  86  336    1  252
## 7209 NP_001349068.1 XP_021331371.1  50.909  110  54  0  58  167  141  250
## 7210 NP_001349068.1 XP_021329631.1  49.421  259 131  0  58  316   50  308
## 7211 NP_001349068.1 XP_021329631.1  51.092  229 112  0  85  313   49  277
## 7212 NP_001349068.1 XP_021329631.1  47.805  205 107  0 112  316   48  252
## 7213 NP_001349068.1 XP_021329631.1  46.429   84  44  1 251  333   47  130
## 7214 NP_001349068.1 XP_021329631.1  40.000   70  40  1  47  114  263  332
## 7215 NP_001349068.1 XP_017207864.1  45.139  288 157  1  47  333   47  334
## 7216 NP_001349068.1 XP_017207864.1  46.715  274 146  0  46  319  102  375
## 7217 NP_001349068.1 XP_017207864.1  45.926  270 146  0  46  315  130  399
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## 7218 NP_001349068.1 XP_017207864.1  45.865  266 144  0  48  313  160  425
## 7219 NP_001349068.1 XP_017207864.1  44.697  264 146  0  50  313  190  453
## 7220 NP_001349068.1 XP_017207864.1  47.674  258 135  0  58  315   86  343
## 7221 NP_001349068.1 XP_017207864.1  44.737  266 141  1  61  320   33  298
## 7222 NP_001349068.1 XP_017207864.1  43.874  253 139  1  58  310  226  475
## 7223 NP_001349068.1 XP_017207864.1  46.186  236 125  1  82  315   24  259
## 7224 NP_001349068.1 XP_017207864.1  42.857  210 118  1 111  318   25  234
## 7225 NP_001349068.1 XP_017207864.1  40.865  208 120  1  47  254  271  475
## 7226 NP_001349068.1 XP_017211167.1  52.191  251 120  0  63  313   66  316
## 7227 NP_001349068.1 XP_017211167.1  47.699  239 125  0  50  288   81  319
## 7228 NP_001349068.1 XP_017211167.1  49.115  226 115  0  88  313   63  288
## 7229 NP_001349068.1 XP_017211167.1  49.500  200 101  0 116  315   63  262
## 7230 NP_001349068.1 XP_017210839.1  47.431  253 133  0  63  315   82  334
## 7231 NP_001349068.1 XP_017210839.1  41.636  269 157  0  48  316  123  391
## 7232 NP_001349068.1 XP_017210839.1  40.467  257 153  0  58  314  161  417
## 7233 NP_001349068.1 XP_017211130.1  47.876  259 134  1  58  315  105  363
## 7234 NP_001349068.1 XP_017211130.1  44.528  265 146  1  48  311  123  387
## 7235 NP_001349068.1 XP_017211130.1  47.222  252 132  1  63  313   82  333
## 7236 NP_001349068.1 XP_017211130.1  41.418  268 156  1  48  314  179  446
## 7237 NP_001349068.1 XP_017211130.1  46.250  240 120  2  83  313   66  305
## 7238 NP_001349068.1 XP_017209852.2  45.907  281 133  1  58  319  194  474
## 7239 NP_001349068.1 XP_017209852.2  45.600  250 136  0  59  308   83  332
## 7240 NP_001349068.1 XP_017209852.2  42.617  298 151  2  56  333  136  433
## 7241 NP_001349068.1 XP_017209852.2  46.718  259 119  1  56  295  220  478
## 7242 NP_001349068.1 XP_017209852.2  43.015  272 136  1  63  315  115  386
## 7243 NP_001349068.1 XP_017209852.2  44.141  256 143  0  60  315   56  311
## 7244 NP_001349068.1 XP_017209852.2  43.701  254 139  1  63  316   35  284
## 7245 NP_001349068.1 XP_017209933.1  50.566  265 129  2  50  313   52  315
## 7246 NP_001349068.1 XP_017209933.1  50.218  229 113  1  58  286   89  316
## 7247 NP_001349068.1 XP_017209933.1  50.340  147  72  1  58  204  173  318
## 7248 NP_001349068.1 XP_021331303.1  49.242  264 133  1  50  312   52  315
## 7249 NP_001349068.1 XP_021331303.1  48.092  262 136  0  58  319   89  350
## 7250 NP_001349068.1 XP_021331303.1  49.115  226 115  0  88  313   63  288
## 7251 NP_001349068.1 XP_021331303.1  47.771  157  81  1 175  330   66  222
## 7252 NP_001349068.1 XP_021331303.1  35.849  106  40  1  58  135  285  390
## 7253 NP_001349068.1 XP_017211103.1  50.379  264 131  0  50  313   81  344
## 7254 NP_001349068.1 XP_017211103.1  48.302  265 136  1  50  313   52  316
## 7255 NP_001349068.1 XP_017211103.1  47.162  229 121  0  58  286  117  345
## 7256 NP_001349068.1 NP_001314951.1  46.980  298 156  2  19  315   22  318
## 7257 NP_001349068.1 NP_001314951.1  51.073  233 114  0  58  290   89  321
## 7258 NP_001349068.1 NP_001314951.1  48.673  226 116  0  91  316   66  291
## 7259 NP_001349068.1 XP_017209955.1  47.809  251 131  0  63  313   82  332
## 7260 NP_001349068.1 XP_017209955.1  44.697  264 146  0  48  311  123  386
## 7261 NP_001349068.1 XP_017209955.1  42.085  259 150  0  58  316  161  419
## 7262 NP_001349068.1 XP_017209955.1  43.411  258 146  0  56  313  187  444
## 7263 NP_001349068.1 XP_017209955.1  42.636  258 140  1  56  313   55  304
## 7264 NP_001349068.1 XP_017209955.1  36.264   91  58  0  56  146  355  445
## 7265 NP_001349068.1 XP_021331309.1  44.483  290 148  2  39  315    6  295
## 7266 NP_001349068.1 XP_021331309.1  42.322  267 154  0  48  314   84  350
## 7267 NP_001349068.1 XP_021331309.1  41.924  291 160  2  31  312   30  320
## 7268 NP_001349068.1 XP_021331309.1  46.018  226 122  0  91  316   43  268
## 7269 NP_001349068.1 XP_017210364.1  47.761  268 140  0  46  313   94  361
## 7270 NP_001349068.1 XP_017210364.1  47.191  267 141  0  50  316  182  448
## 7271 NP_001349068.1 XP_017210364.1  40.000  335 166  3   7  313  174  501
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## 7272 NP_001349068.1 XP_017210364.1  48.047  256 133  0  58  313   78  333
## 7273 NP_001349068.1 XP_017210364.1  44.403  268 148  1  50  316   41  308
## 7274 NP_001349068.1 XP_017210364.1  42.105  304 142  2  44  313  114  417
## 7275 NP_001349068.1 XP_017210364.1  44.747  257 142  0  58  314  274  530
## 7276 NP_001349068.1 XP_017210364.1  43.019  265 151  0  49  313  293  557
## 7277 NP_001349068.1 XP_017210364.1  49.153  118  60  0  59  176  443  560
## 7278 NP_001349068.1 XP_021331056.1  48.560  243 125  0  73  315   16  258
## 7279 NP_001349068.1 XP_021331056.1  50.885  226 111  0  58  283   29  254
## 7280 NP_001349068.1 XP_021331056.1  47.253   91  48  0  58  148  169  259
## 7281 NP_001349068.1 XP_021323944.1  46.468  269 144  0  46  314  121  389
## 7282 NP_001349068.1 XP_021323944.1  46.350  274 147  0  46  319   93  366
## 7283 NP_001349068.1 XP_021323944.1  44.030  268 150  0  46  313  177  444
## 7284 NP_001349068.1 XP_021323944.1  45.926  270 146  0  46  315   65  334
## 7285 NP_001349068.1 XP_021323944.1  41.720  314 173  3  29  333   13  325
## 7286 NP_001349068.1 XP_021323944.1  45.703  256 139  0  58  313  161  416
## 7287 NP_001349068.1 XP_021323944.1  44.105  229 128  0  58  286  217  445
## 7288 NP_001349068.1 XP_021323944.1  41.290  155  91  0  48  202  291  445
## 7289 NP_001349068.1 XP_021323944.1  33.333   45  30  0  46   90  401  445
## 7290 NP_001349068.1 XP_017211226.1  48.529  272 139  1  50  320   52  323
## 7291 NP_001349068.1 XP_017211226.1  35.849  106  40  1  58  135  257  362
## 7292 NP_001349068.1 XP_021327009.1  47.388  268 139  2  50  316   42  308
## 7293 NP_001349068.1 XP_021327009.1  46.825  252 133  1  60  311   81  331
## 7294 NP_001349068.1 XP_021327009.1  49.561  228 115  0  56  283  104  331
## 7295 NP_001349068.1 XP_021327008.1  47.388  268 139  2  50  316   42  308
## 7296 NP_001349068.1 XP_021327008.1  46.825  252 133  1  60  311   81  331
## 7297 NP_001349068.1 XP_021327008.1  49.561  228 115  0  56  283  104  331
## 7298 NP_001349068.1 XP_021327007.1  47.388  268 139  2  50  316   42  308
## 7299 NP_001349068.1 XP_021327007.1  46.825  252 133  1  60  311   81  331
## 7300 NP_001349068.1 XP_021327007.1  49.561  228 115  0  56  283  104  331
## 7301 NP_001349068.1 XP_009296573.2  48.031  254 132  0  58  311   41  294
## 7302 NP_001349068.1 XP_009296573.2  48.828  256 131  0  58  313   13  268
## 7303 NP_001349068.1 XP_009296573.2  44.876  283 154  1  33  313   42  324
## 7304 NP_001349068.1 XP_009296573.2  47.266  256 135  0  58  313   97  352
## 7305 NP_001349068.1 XP_009296573.2  46.332  259 139  0  58  316  153  411
## 7306 NP_001349068.1 XP_009296573.2  44.906  265 146  0  49  313  200  464
## 7307 NP_001349068.1 XP_009296573.2  48.819  254 130  0  60  313  183  436
## 7308 NP_001349068.1 XP_009296573.2  45.560  259 141  0  58  316  125  383
## 7309 NP_001349068.1 XP_009296573.2  43.333  270 153  0  49  318  228  497
## 7310 NP_001349068.1 XP_009296573.2  46.078  204 110  0 112  315   11  214
## 7311 NP_001349068.1 XP_009296573.2  50.000   66  33  0 250  315    9   74
## 7312 NP_001349068.1 NP_001104669.1  45.038  262 144  0  50  311   96  357
## 7313 NP_001349068.1 NP_001104669.1  47.826  253 132  0  63  315   81  333
## 7314 NP_001349068.1 NP_001104669.1  45.977  261 141  0  56  316  130  390
## 7315 NP_001349068.1 NP_001104669.1  43.969  257 144  0  58  314  160  416
## 7316 NP_001349068.1 NP_001104669.1  43.721  215 120  1 120  333   82  296
## 7317 NP_001349068.1 XP_017210573.1  45.038  262 144  0  50  311   96  357
## 7318 NP_001349068.1 XP_017210573.1  47.826  253 132  0  63  315   81  333
## 7319 NP_001349068.1 XP_017210573.1  45.977  261 141  0  56  316  130  390
## 7320 NP_001349068.1 XP_017210573.1  43.969  257 144  0  58  314  160  416
## 7321 NP_001349068.1 XP_017210573.1  43.721  215 120  1 120  333   82  296
## 7322 NP_001349068.1 XP_017211129.1  45.455  264 144  0  48  311  123  386
## 7323 NP_001349068.1 XP_017211129.1  47.012  251 133  0  63  313   82  332
## 7324 NP_001349068.1 XP_017211129.1  44.569  267 148  0  50  316  153  419
## 7325 NP_001349068.1 XP_017211129.1  45.882  170  92  0 146  315   81  250
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## 7326 NP_001349068.1 XP_017211129.1  47.917  144  75  0 172  315   79  222
## 7327 NP_001349068.1 XP_017211057.1  47.012  251 133  0  63  313   82  332
## 7328 NP_001349068.1 XP_017211057.1  44.318  264 147  0  48  311  123  386
## 7329 NP_001349068.1 XP_017211057.1  43.922  255 143  0  58  312  189  443
## 7330 NP_001349068.1 XP_017211057.1  40.154  259 155  0  58  316  161  419
## 7331 NP_001349068.1 XP_017211057.1  39.437  284 157  2  30  313   36  304
## 7332 NP_001349068.1 XP_017211057.1  40.465  215 126  1 103  315   64  278
## 7333 NP_001349068.1 XP_017210198.1  42.671  307 173  2  12  316    1  306
## 7334 NP_001349068.1 XP_017210198.1  46.360  261 140  0  56  316   74  334
## 7335 NP_001349068.1 XP_017210198.1  43.182  264 150  0  50  313  124  387
## 7336 NP_001349068.1 XP_017210198.1  42.435  271 156  0  46  316   92  362
## 7337 NP_001349068.1 XP_017210198.1  46.025  239 129  0  48  286  150  388
## 7338 NP_001349068.1 XP_021331223.1  49.237  262 133  0  58  319  215  476
## 7339 NP_001349068.1 XP_021331223.1  49.225  258 131  0  58  315  299  556
## 7340 NP_001349068.1 XP_021331223.1  45.296  287 156  1  48  333  121  407
## 7341 NP_001349068.1 XP_021331223.1  51.464  239 116  0  58  296  327  565
## 7342 NP_001349068.1 XP_021331223.1  45.736  258 140  0  58  315  187  444
## 7343 NP_001349068.1 XP_021331223.1  46.586  249 133  0  63  311   80  328
## 7344 NP_001349068.1 XP_021331223.1  47.556  225 118  0  91  315   80  304
## 7345 NP_001349068.1 XP_021331223.1  51.309  191  93  0  58  248  383  573
## 7346 NP_001349068.1 XP_021331223.1  48.214  168  87  0 146  313   79  246
## 7347 NP_001349068.1 XP_021331223.1  45.223  157  78  1 167  315   64  220
## 7348 NP_001349068.1 XP_021331223.1  41.667  132  76  1 203  333   80  211
## 7349 NP_001349068.1 XP_017211015.1  51.394  251 122  0  63  313   66  316
## 7350 NP_001349068.1 XP_017211015.1  47.257  237 125  0  50  286   81  317
## 7351 NP_001349068.1 XP_017211015.1  50.254  197  98  0 119  315   66  262
## 7352 NP_001349068.1 XP_017211015.1  49.375  160  80  1 172  330   63  222
## 7353 NP_001349068.1 XP_017210344.1  47.638  254 133  0  58  311   13  266
## 7354 NP_001349068.1 XP_017210344.1  46.290  283 150  1  33  313   42  324
## 7355 NP_001349068.1 XP_017210344.1  45.946  259 140  0  58  316   97  355
## 7356 NP_001349068.1 XP_017210344.1  47.656  256 134  0  58  313  153  408
## 7357 NP_001349068.1 XP_017210344.1  44.788  259 143  0  58  316   41  299
## 7358 NP_001349068.1 XP_017210344.1  48.954  239 120  1  75  313    4  240
## 7359 NP_001349068.1 XP_017210344.1  44.747  257 142  0  60  316  183  439
## 7360 NP_001349068.1 XP_017210344.1  45.575  226 123  0  58  283  209  434
## 7361 NP_001349068.1 XP_017210344.1  34.940  166 101  1   6  171  276  434
## 7362 NP_001349068.1 XP_017211218.1  51.394  251 122  0  63  313   66  316
## 7363 NP_001349068.1 XP_017211218.1  47.257  237 125  0  50  286   81  317
## 7364 NP_001349068.1 XP_017211218.1  50.254  197  98  0 119  315   66  262
## 7365 NP_001349068.1 XP_017211218.1  49.375  160  80  1 172  330   63  222
## 7366 NP_001349068.1 NP_001014384.1  44.251  287 153  2  33  313   40  325
## 7367 NP_001349068.1 NP_001014384.1  40.625  288 167  3  26  313   14  297
## 7368 NP_001349068.1 NP_001014384.1  44.690  226 123  2  58  282  127  351
## 7369 NP_001349068.1 NP_001014384.1  44.211   95  52  1  49  142  257  351
## 7370 NP_001349068.1 XP_005160995.1  44.251  287 153  2  33  313   40  325
## 7371 NP_001349068.1 XP_005160995.1  40.625  288 167  3  26  313   14  297
## 7372 NP_001349068.1 XP_005160995.1  44.690  226 123  2  58  282  127  351
## 7373 NP_001349068.1 XP_005160995.1  44.211   95  52  1  49  142  257  351
## 7374 NP_001349068.1 XP_017208296.1  50.193  259 129  0  58  316  167  425
## 7375 NP_001349068.1 XP_017208296.1  47.015  268 142  0  46  313  127  394
## 7376 NP_001349068.1 XP_017208296.1  48.828  256 131  0  58  313   83  338
## 7377 NP_001349068.1 XP_017208296.1  45.865  266 144  0  48  313  325  590
## 7378 NP_001349068.1 XP_017208296.1  48.047  256 133  0  58  313  223  478
## 7379 NP_001349068.1 XP_017208296.1  50.638  235 116  0  81  315   50  284
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## 7380 NP_001349068.1 XP_017208296.1  48.649  259 133  0  58  316  111  369
## 7381 NP_001349068.1 XP_017208296.1  43.431  274 149  1  44  311  231  504
## 7382 NP_001349068.1 XP_017208296.1  47.656  256 134  0  58  313  307  562
## 7383 NP_001349068.1 XP_017208296.1  45.312  256 140  0  58  313  279  534
## 7384 NP_001349068.1 XP_017208296.1  44.843  223 123  0  91  313   32  254
## 7385 NP_001349068.1 XP_017210349.1  49.624  266 133  1  50  314   42  307
## 7386 NP_001349068.1 XP_017210349.1  44.643   56  31  0 261  316   58  113
## 7387 NP_001349068.1 XP_009298179.1  49.624  266 133  1  50  314   42  307
## 7388 NP_001349068.1 XP_009298179.1  44.643   56  31  0 261  316   58  113
## 7389 NP_001349068.1 XP_009298178.1  49.624  266 133  1  50  314   42  307
## 7390 NP_001349068.1 XP_009298178.1  44.643   56  31  0 261  316   58  113
## 7391 NP_001349068.1 XP_021327153.1  49.624  266 133  1  50  314   42  307
## 7392 NP_001349068.1 XP_021327153.1  44.643   56  31  0 261  316   58  113
## 7393 NP_001349068.1 XP_005170442.1  44.444  270 150  0  46  315  122  391
## 7394 NP_001349068.1 XP_005170442.1  46.886  273 145  0  44  316   64  336
## 7395 NP_001349068.1 XP_005170442.1  41.772  158  91  1  41  198  230  386
## 7396 NP_001349068.1 XP_021331063.1  52.155  232 111  0  82  313    1  232
## 7397 NP_001349068.1 XP_021331063.1  50.215  233 116  0  58  290    5  237
## 7398 NP_001349068.1 XP_021331063.1  51.515   66  32  0  56  121  171  236
## 7399 NP_001349068.1 XP_021327905.1  48.263  259 134  0  58  316  103  361
## 7400 NP_001349068.1 XP_021327905.1  46.642  268 142  1  47  313   35  302
## 7401 NP_001349068.1 XP_021327905.1  45.865  266 144  0  48  313   65  330
## 7402 NP_001349068.1 XP_021327905.1  46.121  232 125  0  58  289  131  362
## 7403 NP_001349068.1 XP_021327905.1  43.038  158  90  0  50  207  207  364
## 7404 NP_001349068.1 XP_017210371.1  48.263  259 134  0  58  316  103  361
## 7405 NP_001349068.1 XP_017210371.1  46.642  268 142  1  47  313   35  302
## 7406 NP_001349068.1 XP_017210371.1  45.865  266 144  0  48  313   65  330
## 7407 NP_001349068.1 XP_017210371.1  46.121  232 125  0  58  289  131  362
## 7408 NP_001349068.1 XP_017210371.1  43.038  158  90  0  50  207  207  364
## 7409 NP_001349068.1 XP_009297802.1  45.660  265 144  0  48  312  141  405
## 7410 NP_001349068.1 XP_009297802.1  47.266  256 135  0  60  315  125  380
## 7411 NP_001349068.1 XP_009297802.1  40.221  271 161  1  64  333   73  343
## 7412 NP_001349068.1 XP_021331500.1  45.126  277 151  1  58  333  153  429
## 7413 NP_001349068.1 XP_021331500.1  43.866  269 151  0  48  316  199  467
## 7414 NP_001349068.1 XP_021331500.1  44.656  262 145  0  58  319  125  386
## 7415 NP_001349068.1 XP_021331500.1  43.165  278 152  1  42  313   75  352
## 7416 NP_001349068.1 XP_021331500.1  45.418  251 137  0  63  313   74  324
## 7417 NP_001349068.1 XP_009301501.1  46.899  258 137  0  58  315  124  381
## 7418 NP_001349068.1 XP_009301501.1  43.321  277 156  1  60  335   98  374
## 7419 NP_001349068.1 XP_009301501.1  43.137  255 144  1  58  311  180  434
## 7420 NP_001349068.1 XP_009301501.1  39.394  330 178  5  19  329   14  340
## 7421 NP_001349068.1 XP_021331255.1  52.074  217 104  0  82  298    1  217
## 7422 NP_001349068.1 XP_021331255.1  50.233  215 107  0  58  272    5  219
## 7423 NP_001349068.1 XP_021331255.1  49.282  209 106  0 111  319    2  210
## 7424 NP_001349068.1 XP_021331255.1  50.649  154  76  0 166  319    1  154
## 7425 NP_001349068.1 XP_021327011.1  50.826  242 114  1  80  316   40  281
## 7426 NP_001349068.1 XP_021327011.1  50.427  234 115  1  63  296   56  288
## 7427 NP_001349068.1 XP_021327011.1  48.598  214 110  0  48  261   69  282
## 7428 NP_001349068.1 XP_021327011.1  48.634  183  93  1  58  240  107  288
## 7429 NP_001349068.1 XP_021327010.1  50.826  242 114  1  80  316   40  281
## 7430 NP_001349068.1 XP_021327010.1  50.427  234 115  1  63  296   56  288
## 7431 NP_001349068.1 XP_021327010.1  48.598  214 110  0  48  261   69  282
## 7432 NP_001349068.1 XP_021327010.1  48.634  183  93  1  58  240  107  288
## 7433 NP_001349068.1 XP_021324489.1  48.828  256 131  0  58  313   33  288
```

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## 7434 NP_001349068.1 XP_021324489.1  45.833  264 143  0  46  309   77  340
## 7435 NP_001349068.1 XP_021324489.1  47.619  273 142  1  58  329   61  333
## 7436 NP_001349068.1 XP_021324489.1  50.427  234 116  0  82  315    1  234
## 7437 NP_001349068.1 XP_021324489.1  41.250  160  88  1  44  197  181  340
## 7438 NP_001349068.1 NP_001025265.3  49.398  249 126  0  63  311   39  287
## 7439 NP_001349068.1 NP_001025265.3  47.170  265 140  0  49  313  109  373
## 7440 NP_001349068.1 NP_001025265.3  47.266  256 135  0  58  313   62  317
## 7441 NP_001349068.1 NP_001025265.3  45.798  238 129  0  49  286  137  374
## 7442 NP_001349068.1 NP_001025265.3  46.606  221 118  0  93  313   41  261
## 7443 NP_001349068.1 NP_001025265.3  50.000  200 100  0 115  314   35  234
## 7444 NP_001349068.1 NP_001025265.3  46.939   98  52  0  48  145  276  373
## 7445 NP_001349068.1 XP_017210838.1  46.215  251 135  0  63  313   82  332
## 7446 NP_001349068.1 XP_017210838.1  43.561  264 149  0  48  311  123  386
## 7447 NP_001349068.1 XP_017210838.1  43.580  257 145  0  58  314  189  445
## 7448 NP_001349068.1 XP_017210838.1  41.313  259 152  0  58  316  161  419
## 7449 NP_001349068.1 XP_017210838.1  42.640  197 113  0 119  315   82  278
## 7450 NP_001349068.1 XP_021330478.1  50.388  258 128  0  58  315   13  270
## 7451 NP_001349068.1 XP_021330478.1  48.031  254 132  0  58  311   97  350
## 7452 NP_001349068.1 XP_021330478.1  48.249  257 133  0  58  314  495  751
## 7453 NP_001349068.1 XP_021330478.1  49.035  259 132  0  58  316  153  411
## 7454 NP_001349068.1 XP_021330478.1  47.656  256 134  0  58  313   69  324
## 7455 NP_001349068.1 XP_021330478.1  44.815  270 149  0  49  318  116  385
## 7456 NP_001349068.1 XP_021330478.1  44.948  287 151  1  34  313  436  722
## 7457 NP_001349068.1 XP_021330478.1  46.875  256 136  0  58  313  181  436
## 7458 NP_001349068.1 XP_021330478.1  43.463  283 153  3  58  333  349  631
## 7459 NP_001349068.1 XP_021330478.1  42.599  277 152  3  43  313  419  694
## 7460 NP_001349068.1 XP_021330478.1  45.532  235 128  0  81  315    8  242
## 7461 NP_001349068.1 XP_021330478.1  46.774  186  98  1 130  315    2  186
## 7462 NP_001349068.1 XP_021330478.1  44.737  152  84  0  50  201  599  750
## 7463 NP_001349068.1 XP_021330478.1  40.426   47  27  1  43   89  705  750
## 7464 NP_001349068.1 XP_021324487.1  48.828  256 131  0  58  313   82  337
## 7465 NP_001349068.1 XP_021324487.1  45.833  264 143  0  46  309  126  389
## 7466 NP_001349068.1 XP_021324487.1  50.638  235 116  0  81  315   49  283
## 7467 NP_001349068.1 XP_021324487.1  47.619  273 142  1  58  329  110  382
## 7468 NP_001349068.1 XP_021324487.1  44.843  223 123  0  91  313   31  253
## 7469 NP_001349068.1 XP_021324487.1  41.250  160  88  1  44  197  230  389
## 7470 NP_001349068.1 NP_001314925.1  47.619  273 141  2  19  290   22  293
## 7471 NP_001349068.1 NP_001314925.1  52.212  226 108  0  88  313   63  288
## 7472 NP_001349068.1 XP_021331298.1  46.899  258 137  0  58  315  124  381
## 7473 NP_001349068.1 XP_021331298.1  46.094  256 138  0  60  315   98  353
## 7474 NP_001349068.1 XP_021331298.1  42.636  258 147  1  58  314  180  437
## 7475 NP_001349068.1 XP_021331298.1  39.697  330 177  5  19  329   14  340
## 7476 NP_001349068.1 XP_021331297.1  46.899  258 137  0  58  315  124  381
## 7477 NP_001349068.1 XP_021331297.1  46.094  256 138  0  60  315   98  353
## 7478 NP_001349068.1 XP_021331297.1  42.636  258 147  1  58  314  180  437
## 7479 NP_001349068.1 XP_021331297.1  39.697  330 177  5  19  329   14  340
## 7480 NP_001349068.1 XP_009299002.1  46.215  251 135  0  63  313   82  332
## 7481 NP_001349068.1 XP_009299002.1  44.318  264 147  0  48  311  123  386
## 7482 NP_001349068.1 XP_009299002.1  44.706  255 141  0  58  312  189  443
## 7483 NP_001349068.1 XP_009299002.1  40.541  259 154  0  58  316  161  419
## 7484 NP_001349068.1 XP_009299002.1  41.624  197 115  0 119  315   82  278
## 7485 NP_001349068.1 XP_009299002.1  42.857  168  96  0 146  313   81  248
## 7486 NP_001349068.1 XP_009299002.1  47.887  142  74  0 172  313   79  220
## 7487 NP_001349068.1 NP_001116099.1  49.402  251 127  0  63  313   65  315
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## 7488 NP_001349068.1 NP_001116099.1  49.785  233 117  0  58  290   88  320
## 7489 NP_001349068.1 NP_001116099.1  47.368  114  60  0 203  316   65  178
## 7490 NP_001349068.1 XP_017210218.1  47.170  265 140  0  49  313   76  340
## 7491 NP_001349068.1 XP_017210218.1  45.703  256 139  0  58  313  169  424
## 7492 NP_001349068.1 XP_017210218.1  46.875  256 136  0  58  313  141  396
## 7493 NP_001349068.1 XP_017210218.1  45.914  257 139  0  58  314  113  369
## 7494 NP_001349068.1 XP_017210218.1  42.697  267 153  0  48  314  271  537
## 7495 NP_001349068.1 XP_017210218.1  42.697  267 153  0  47  313  242  508
## 7496 NP_001349068.1 XP_017210218.1  40.411  292 146  1  50  313  301  592
## 7497 NP_001349068.1 XP_017210218.1  41.573  267 156  0  50  316  217  483
## 7498 NP_001349068.1 XP_017210218.1  42.322  267 154  0  50  316  189  455
## 7499 NP_001349068.1 XP_017210218.1  43.580  257 141  1  60  316   35  287
## 7500 NP_001349068.1 XP_017210218.1  40.927  259 153  0  58  316  365  623
## 7501 NP_001349068.1 XP_017210218.1  41.327  196 115  0  58  253  449  644
## 7502 NP_001349068.1 XP_017210218.1  34.848   66  43  0  58  123  589  654
## 7503 NP_001349068.1 XP_021331372.1  50.206  243 120  1  68  309    2  244
## 7504 NP_001349068.1 XP_021331372.1  52.727  220 104  0  58  277   20  239
## 7505 NP_001349068.1 XP_021331372.1  51.598  219 106  0  95  313    1  219
## 7506 NP_001349068.1 XP_021331372.1  51.818  110  53  0  58  167  132  241
## 7507 NP_001349068.1 XP_021331372.1  55.172   29  12  1  58   85  216  244
## 7508 NP_001349068.1 XP_021330856.1  47.510  261 136  1  50  309   57  317
## 7509 NP_001349068.1 XP_021330856.1  47.131  244 125  1  70  313   54  293
## 7510 NP_001349068.1 XP_021330856.1  32.597  181  89  2 166  313    1  181
## 7511 NP_001349068.1 XP_021330856.1  49.123   57  29  0 259  315   71  127
## 7512 NP_001349068.1 NP_001103336.1  46.512  258 138  0  56  313   58  315
## 7513 NP_001349068.1 NP_001103336.1  45.489  266 145  0  48  313   22  287
## 7514 NP_001349068.1 NP_001103336.1  45.560  259 140  1  56  313    1  259
## 7515 NP_001349068.1 NP_001103336.1  46.610  236 126  0  50  285  108  343
## 7516 NP_001349068.1 NP_001103336.1  43.671  158  89  0  47  204  189  346
## 7517 NP_001349068.1 XP_021331300.1  46.124  258 139  0  58  315  124  381
## 7518 NP_001349068.1 XP_021331300.1  44.922  256 141  0  60  315   98  353
## 7519 NP_001349068.1 XP_021331300.1  42.353  255 146  1  58  311  180  434
## 7520 NP_001349068.1 XP_021331300.1  43.820  267 146  2  67  329   74  340
## 7521 NP_001349068.1 XP_021325042.1  48.339  271 140  0  44  314   68  338
## 7522 NP_001349068.1 XP_021325042.1  44.747  257 142  0  58  314  110  366
## 7523 NP_001349068.1 XP_021325042.1  40.264  303 135  3  58  314  556  858
## 7524 NP_001349068.1 XP_021325042.1  38.411  302 140  3  61  316  503  804
## 7525 NP_001349068.1 XP_021325042.1  43.169  183 104  0  50  232  186  368
## 7526 NP_001349068.1 XP_021325042.1  42.581  155  89  0  49  203  705  859
## 7527 NP_001349068.1 XP_021325042.1  33.191  235 121  4 142  342  500  732
## 7528 NP_001349068.1 NP_001107943.1  48.438  256 132  0  58  313   83  338
## 7529 NP_001349068.1 NP_001107943.1  45.833  264 143  0  46  309  127  390
## 7530 NP_001349068.1 NP_001107943.1  50.638  235 116  0  81  315   50  284
## 7531 NP_001349068.1 NP_001107943.1  47.253  273 143  1  58  329  111  383
## 7532 NP_001349068.1 NP_001107943.1  44.843  223 123  0  91  313   32  254
## 7533 NP_001349068.1 NP_001107943.1  40.625  160  89  1  44  197  231  390
## 7534 NP_001349068.1 XP_017210947.1  47.212  269 141  1  42  309   44  312
## 7535 NP_001349068.1 XP_017210947.1  51.111  225 106  1  58  278   89  313
## 7536 NP_001349068.1 XP_017210947.1  48.963  241 122  1  91  330   66  306
## 7537 NP_001349068.1 XP_021331137.1  45.318  267 145  1  50  315   52  318
## 7538 NP_001349068.1 NP_001121721.2  44.195  267 149  0  50  316   95  361
## 7539 NP_001349068.1 NP_001121721.2  44.747  257 142  0  58  314  131  387
## 7540 NP_001349068.1 NP_001121721.2  38.730  315 171  2  19  311   14  328
## 7541 NP_001349068.1 NP_001121721.2  36.842  152  96  0  50  201  235  386
```

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## 7542 NP_001349068.1 XP_021328589.1  43.182  308 168  1   6  313  166  466
## 7543 NP_001349068.1 XP_021328589.1  48.134  268 139  0  46  313  255  522
## 7544 NP_001349068.1 XP_021328589.1  47.170  265 140  0  50  314  175  439
## 7545 NP_001349068.1 XP_021328589.1  48.828  256 131  0  58  313  127  382
## 7546 NP_001349068.1 XP_021328589.1  47.794  272 141  1  43  314  225  495
## 7547 NP_001349068.1 XP_021328589.1  46.642  268 143  0  49  316   34  301
## 7548 NP_001349068.1 XP_021328589.1  47.727  264 138  0  50  313  343  606
## 7549 NP_001349068.1 XP_021328589.1  47.925  265 138  0  49  313  286  550
## 7550 NP_001349068.1 XP_021328589.1  46.970  264 140  0  50  313  147  410
## 7551 NP_001349068.1 XP_021328589.1  48.819  254 130  0  63  316   20  273
## 7552 NP_001349068.1 XP_021328589.1  47.755  245 126  1  46  288  365  609
## 7553 NP_001349068.1 XP_021328589.1  44.667  150  83  0  58  207  463  612
## 7554 NP_001349068.1 XP_021328589.1  45.070   71  39  0  58  128  547  617
## 7555 NP_001349068.1 XP_017210982.1  44.882  254 140  0  58  311  133  386
## 7556 NP_001349068.1 XP_017210982.1  47.012  251 133  0  63  313   82  332
## 7557 NP_001349068.1 XP_017210982.1  44.922  256 141  0  60  315  107  362
## 7558 NP_001349068.1 XP_017210982.1  45.455  253 138  0  58  310  161  413
## 7559 NP_001349068.1 XP_017210982.1  41.569  255 149  0  58  312  189  443
## 7560 NP_001349068.1 XP_017210982.1  43.529  170  96  0 146  315   81  250
## 7561 NP_001349068.1 XP_017210982.1  45.070  142  78  0 172  313   79  220
## 7562 NP_001349068.1 XP_021324420.1  41.993  281 163  0  29  309   48  328
## 7563 NP_001349068.1 XP_021324420.1  46.429  224 120  0  90  313   81  304
## 7564 NP_001349068.1 XP_021324420.1  45.366  205 112  0 111  315   74  278
## 7565 NP_001349068.1 XP_009299025.2  45.490  255 138  1  60  314  102  355
## 7566 NP_001349068.1 XP_009299025.2  41.912  272 158  0  63  334   77  348
## 7567 NP_001349068.1 XP_009299025.2  43.860  228 127  1  58  285  128  354
## 7568 NP_001349068.1 XP_009299025.2  45.238  168  92  0 146  313   76  243
## 7569 NP_001349068.1 XP_017210837.1  45.736  258 140  0  58  315  101  358
## 7570 NP_001349068.1 XP_017210837.1  41.877  277 160  1  58  333  157  433
## 7571 NP_001349068.1 XP_017210837.1  45.817  251 136  0  63  313   78  328
## 7572 NP_001349068.1 XP_017210837.1  43.701  254 143  0  58  311  129  382
## 7573 NP_001349068.1 XP_017210837.1  45.740  223 121  0  93  315   80  302
## 7574 NP_001349068.1 XP_017210837.1  40.784  255 151  0  60  314  187  441
## 7575 NP_001349068.1 XP_017210837.1  40.789  228 135  0  58  285  213  440
## 7576 NP_001349068.1 XP_017210837.1  42.523  214 122  1 121  333   80  293
## 7577 NP_001349068.1 XP_017210014.1  45.490  255 138  1  60  314   72  325
## 7578 NP_001349068.1 XP_017210014.1  41.912  272 158  0  63  334   47  318
## 7579 NP_001349068.1 XP_017210014.1  39.643  280 161  2   6  285   53  324
## 7580 NP_001349068.1 XP_017210014.1  45.238  168  92  0 146  313   46  213
## 7581 NP_001349068.1 XP_021328707.1  48.485  264 136  0  50  313  117  380
## 7582 NP_001349068.1 XP_021328707.1  44.257  296 137  1  49  316  228  523
## 7583 NP_001349068.1 XP_021328707.1  45.588  272 147  1  43  314  195  465
## 7584 NP_001349068.1 XP_021328707.1  45.614  285 154  1  50  333   61  345
## 7585 NP_001349068.1 XP_021328707.1  46.816  267 142  0  47  313   30  296
## 7586 NP_001349068.1 XP_021328707.1  44.776  268 148  0  49  316  144  411
## 7587 NP_001349068.1 XP_021328707.1  46.792  265 141  0  49  313  172  436
## 7588 NP_001349068.1 XP_021328707.1  45.833  264 143  0  50  313   89  352
## 7589 NP_001349068.1 XP_021328707.1  45.896  268 145  0  46  313    1  268
## 7590 NP_001349068.1 XP_021328707.1  48.117  239 124  0  76  314    3  241
## 7591 NP_001349068.1 XP_021328707.1  43.983  241 135  0  58  298  293  533
## 7592 NP_001349068.1 XP_021328707.1  42.188  256 146  1  33  286  294  549
## 7593 NP_001349068.1 NP_001353349.1  46.591  264 140  1  50  312   42  305
## 7594 NP_001349068.1 NP_001353349.1  47.598  229 120  0  58  286   79  307
## 7595 NP_001349068.1 NP_001353349.1  45.492  244 129  2  70  313   39  278
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## 7596 NP_001349068.1 NP_001353349.1  44.828   58  32  0 259  316   56  113
## 7597 NP_001349068.1 NP_001353349.1  46.341   41  22  0  50   90  267  307
## 7598 NP_001349068.1 XP_017211097.1  45.882  255 137  1  60  314  102  355
## 7599 NP_001349068.1 XP_017211097.1  41.912  272 158  0  63  334   77  348
## 7600 NP_001349068.1 XP_017211097.1  44.298  228 126  1  58  285  128  354
## 7601 NP_001349068.1 XP_017211097.1  45.238  168  92  0 146  313   76  243
## 7602 NP_001349068.1 XP_021332639.1  45.914  257 138  1  58  314  107  362
## 7603 NP_001349068.1 XP_021332639.1  46.473  241 123  4  78  316   72  308
## 7604 NP_001349068.1 XP_021332639.1  39.552  134  73  4 189  319   71  199
## 7605 NP_001349068.1 XP_021332639.1  40.476   42  25  0  48   89  320  361
## 7606 NP_001349068.1 XP_017210985.1  46.988  249 132  0  63  311   82  330
## 7607 NP_001349068.1 XP_017210985.1  43.191  257 146  0  60  316  107  363
## 7608 NP_001349068.1 XP_017210985.1  48.000  225 117  0  91  315   82  306
## 7609 NP_001349068.1 XP_017210985.1  40.449  267 159  0  48  314  123  389
## 7610 NP_001349068.1 XP_021327368.1  46.816  267 141  1  46  311    1  267
## 7611 NP_001349068.1 XP_021327368.1  45.113  266 146  0  48  313   32  297
## 7612 NP_001349068.1 XP_021327368.1  45.249  221 121  0  93  313   21  241
## 7613 NP_001349068.1 XP_021327368.1  50.251  199  99  0 116  314   16  214
## 7614 NP_001349068.1 XP_021327368.1  37.209   43  27  0  47   89  283  325
## 7615 NP_001349068.1 XP_021332373.1  46.816  267 141  1  46  311    1  267
## 7616 NP_001349068.1 XP_021332373.1  45.113  266 146  0  48  313   32  297
## 7617 NP_001349068.1 XP_021332373.1  45.249  221 121  0  93  313   21  241
## 7618 NP_001349068.1 XP_021332373.1  50.251  199  99  0 116  314   16  214
## 7619 NP_001349068.1 XP_021332373.1  37.209   43  27  0  47   89  283  325
## 7620 NP_001349068.1 XP_021330826.1  50.400  250 122  2  60  309   20  267
## 7621 NP_001349068.1 XP_021330826.1  50.215  233 115  1  49  281   36  267
## 7622 NP_001349068.1 XP_021330826.1  50.218  229 113  1  88  316   20  247
## 7623 NP_001349068.1 XP_021330826.1  45.390  141  76  1  29  169  128  267
## 7624 NP_001349068.1 XP_021324998.1  47.037  270 143  0  47  316  157  426
## 7625 NP_001349068.1 XP_021324998.1  48.450  258 133  0  56  313   82  339
## 7626 NP_001349068.1 XP_021324998.1  42.806  278 152  2  58  335  140  410
## 7627 NP_001349068.1 XP_021324998.1  44.402  259 144  0  58  316  112  370
## 7628 NP_001349068.1 XP_021324998.1  41.958  286 165  1  31  316    2  286
## 7629 NP_001349068.1 XP_021324998.1  45.865  133  71  1  43  175  294  425
## 7630 NP_001349068.1 XP_009301296.1  49.219  256 130  0  58  313  104  359
## 7631 NP_001349068.1 XP_009301296.1  47.266  256 135  0  58  313   76  331
## 7632 NP_001349068.1 XP_009301296.1  43.774  265 149  0  49  313  151  415
## 7633 NP_001349068.1 XP_009301296.1  45.992  237 128  0  50  286  180  416
## 7634 NP_001349068.1 XP_009301296.1  42.292  253 146  0  61  313   23  275
## 7635 NP_001349068.1 XP_009301296.1  44.601  213 118  0  46  258  204  416
## 7636 NP_001349068.1 XP_009301296.1  48.387   31  16  0 283  313   21   51
## 7637 NP_001349068.1 XP_021331432.1  46.800  250 133  0  63  312   39  288
## 7638 NP_001349068.1 XP_021331432.1  45.374  227 124  0  58  284   62  288
## 7639 NP_001349068.1 XP_021331432.1  43.111  225 128  0  91  315   39  263
## 7640 NP_001349068.1 XP_021331432.1  43.284  201 114  0 119  319   39  239
## 7641 NP_001349068.1 XP_009301295.1  49.219  256 130  0  58  313  116  371
## 7642 NP_001349068.1 XP_009301295.1  47.266  256 135  0  58  313   88  343
## 7643 NP_001349068.1 XP_009301295.1  43.774  265 149  0  49  313  163  427
## 7644 NP_001349068.1 XP_009301295.1  45.992  237 128  0  50  286  192  428
## 7645 NP_001349068.1 XP_009301295.1  42.292  253 146  0  61  313   35  287
## 7646 NP_001349068.1 XP_009301295.1  44.601  213 118  0  46  258  216  428
## 7647 NP_001349068.1 XP_009301295.1  48.387   31  16  0 283  313   33   63
## 7648 NP_001349068.1 XP_021330818.1  47.471  257 135  0  59  315   74  330
## 7649 NP_001349068.1 XP_021330818.1  44.815  270 149  0  46  315   89  358
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## 7650 NP_001349068.1 XP_021330818.1  46.899  258 137  0  58  315  157  414
## 7651 NP_001349068.1 XP_021330818.1  45.489  266 145  0  48  313  175  440
## 7652 NP_001349068.1 XP_021330818.1  41.000  100  59  0  46  145  341  440
## 7653 NP_001349068.1 XP_021330818.1  37.607  117  58  4 220  333   49  153
## 7654 NP_001349068.1 XP_017209967.1  47.431  253 133  0  63  315   82  334
## 7655 NP_001349068.1 XP_017209967.1  42.751  269 154  0  48  316  123  391
## 7656 NP_001349068.1 XP_017209967.1  45.914  257 139  0  56  312  159  415
## 7657 NP_001349068.1 XP_017209967.1  45.238  252 138  0  60  311  107  358
## 7658 NP_001349068.1 XP_017209967.1  43.529  170  96  0 146  315   81  250
## 7659 NP_001349068.1 XP_017209967.1  44.366  142  79  0 172  313   79  220
## 7660 NP_001349068.1 XP_017209967.1  38.202   89  55  0  58  146  329  417
## 7661 NP_001349068.1 XP_021331130.1  44.358  257 143  0  60  316  107  363
## 7662 NP_001349068.1 XP_021331130.1  46.586  249 133  0  63  311   82  330
## 7663 NP_001349068.1 XP_021331130.1  43.071  267 152  0  48  314  123  389
## 7664 NP_001349068.1 XP_021331130.1  47.111  225 119  0  91  315   82  306
## 7665 NP_001349068.1 XP_021331130.1  42.424  132  75  1 203  333   82  213
## 7666 NP_001349068.1 NP_001107903.1  39.748  317 166  3  19  313   14  327
## 7667 NP_001349068.1 NP_001107903.1  44.404  277 153  1  60  335  102  378
## 7668 NP_001349068.1 NP_001107903.1  40.860  279 164  1  56  333  154  432
## 7669 NP_001349068.1 NP_001107903.1  43.359  256 145  0  56  311  126  381
## 7670 NP_001349068.1 NP_001107903.1  42.391  276 153  1  45  314  165  440
## 7671 NP_001349068.1 NP_001107903.1  44.286  210 116  1 121  329   79  288
## 7672 NP_001349068.1 XP_021323165.1  44.906  265 146  0  49  313   87  351
## 7673 NP_001349068.1 XP_021323165.1  48.193  249 129  0  65  313   75  323
## 7674 NP_001349068.1 XP_021323165.1  48.438  192  99  0 120  311   74  265
## 7675 NP_001349068.1 XP_021323165.1  69.231   26   8  0 288  313   74   99
## 7676 NP_001349068.1 XP_021331235.1  45.490  255 138  1  60  314  102  355
## 7677 NP_001349068.1 XP_021331235.1  41.912  272 158  0  63  334   77  348
## 7678 NP_001349068.1 XP_021331235.1  43.860  228 127  1  58  285  128  354
## 7679 NP_001349068.1 XP_021331235.1  45.238  168  92  0 146  313   76  243
## 7680 NP_001349068.1 XP_017211118.1  45.490  255 138  1  60  314  102  355
## 7681 NP_001349068.1 XP_017211118.1  41.912  272 158  0  63  334   77  348
## 7682 NP_001349068.1 XP_017211118.1  43.860  228 127  1  58  285  128  354
## 7683 NP_001349068.1 XP_017211118.1  45.238  168  92  0 146  313   76  243
## 7684 NP_001349068.1 XP_001923592.1  46.617  266 142  0  48  313   37  302
## 7685 NP_001349068.1 XP_001923592.1  44.223  251 140  0  65  315   26  276
## 7686 NP_001349068.1 XP_001923592.1  50.000  108  54  0 204  311   25  132
## 7687 NP_001349068.1 XP_001923592.1  43.902   82  46  0 232  313   25  106
## 7688 NP_001349068.1 XP_021330457.1  49.213  254 129  0  58  311    5  258
## 7689 NP_001349068.1 XP_021330457.1  42.857  287 136  1  58  316   33  319
## 7690 NP_001349068.1 XP_021330457.1  48.101  237 123  0  82  318    1  237
## 7691 NP_001349068.1 XP_021330457.1  43.243  296 140  1  46  313   77  372
## 7692 NP_001349068.1 XP_021330457.1  51.042   96  47  0 224  319    3   98
## 7693 NP_001349068.1 XP_021330456.1  49.213  254 129  0  58  311    5  258
## 7694 NP_001349068.1 XP_021330456.1  42.857  287 136  1  58  316   33  319
## 7695 NP_001349068.1 XP_021330456.1  48.101  237 123  0  82  318    1  237
## 7696 NP_001349068.1 XP_021330456.1  43.243  296 140  1  46  313   77  372
## 7697 NP_001349068.1 XP_021330456.1  51.042   96  47  0 224  319    3   98
## 7698 NP_001349068.1 XP_021327230.1  42.857  266 152  0  48  313   89  354
## 7699 NP_001349068.1 XP_021327230.1  40.067  297 175  1  19  315   35  328
## 7700 NP_001349068.1 XP_021327230.1  46.414  237 127  0  83  319   68  304
## 7701 NP_001349068.1 XP_021327230.1  48.309  207 107  0 110  316   67  273
## 7702 NP_001349068.1 XP_017211312.1  42.857  266 152  0  48  313   89  354
## 7703 NP_001349068.1 XP_017211312.1  40.067  297 175  1  19  315   35  328
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## 7704 NP_001349068.1 XP_017211312.1  46.414  237 127  0  83  319   68  304
## 7705 NP_001349068.1 XP_017211312.1  48.309  207 107  0 110  316   67  273
## 7706 NP_001349068.1 XP_021331487.1  42.857  266 152  0  48  313   89  354
## 7707 NP_001349068.1 XP_021331487.1  40.067  297 175  1  19  315   35  328
## 7708 NP_001349068.1 XP_021331487.1  46.414  237 127  0  83  319   68  304
## 7709 NP_001349068.1 XP_021331487.1  48.309  207 107  0 110  316   67  273
## 7710 NP_001349068.1 XP_021331486.1  42.857  266 152  0  48  313   89  354
## 7711 NP_001349068.1 XP_021331486.1  40.067  297 175  1  19  315   35  328
## 7712 NP_001349068.1 XP_021331486.1  46.414  237 127  0  83  319   68  304
## 7713 NP_001349068.1 XP_021331486.1  48.309  207 107  0 110  316   67  273
## 7714 NP_001349068.1 XP_021330824.1  42.751  269 154  0  48  316  109  377
## 7715 NP_001349068.1 XP_021330824.1  47.431  253 133  0  63  315   68  320
## 7716 NP_001349068.1 XP_021330824.1  44.747  257 142  0  58  314  147  403
## 7717 NP_001349068.1 XP_021330824.1  46.032  252 136  0  60  311   93  344
## 7718 NP_001349068.1 XP_021330824.1  45.294  170  93  0 146  315   67  236
## 7719 NP_001349068.1 XP_021330824.1  39.773  176  97  2 167  333   52  227
## 7720 NP_001349068.1 XP_021323166.1  44.906  265 146  0  49  313   22  286
## 7721 NP_001349068.1 XP_021323166.1  48.193  249 129  0  65  313   10  258
## 7722 NP_001349068.1 XP_021323166.1  48.438  192  99  0 120  311    9  200
## 7723 NP_001349068.1 XP_021323166.1  69.231   26   8  0 288  313    9   34
## 7724 NP_001349068.1 XP_009294085.1  41.722  302 170  1  20  315   71  372
## 7725 NP_001349068.1 XP_009294085.1  47.619   63  33  0 254  316   87  149
## 7726 NP_001349068.1 XP_009297245.1  46.899  258 137  0  59  316  135  392
## 7727 NP_001349068.1 XP_009297245.1  47.104  259 137  0  58  316   78  336
## 7728 NP_001349068.1 XP_009297245.1  42.164  268 154  1  50  316   41  308
## 7729 NP_001349068.1 XP_009297245.1  46.352  233 125  0  50  282  182  414
## 7730 NP_001349068.1 XP_009297245.1  42.308  156  89  1  43  198  260  414
## 7731 NP_001349068.1 XP_009294086.1  41.722  302 170  1  20  315   60  361
## 7732 NP_001349068.1 XP_009294086.1  47.619   63  33  0 254  316   76  138
## 7733 NP_001349068.1 XP_021331498.1  43.902  287 160  1  48  333  405  691
## 7734 NP_001349068.1 XP_021331498.1  46.923  260 138  0  56  315  161  420
## 7735 NP_001349068.1 XP_021331498.1  44.528  265 147  0  49  313  238  502
## 7736 NP_001349068.1 XP_021331498.1  47.388  268 141  0  46  313  571  838
## 7737 NP_001349068.1 XP_021331498.1  44.238  269 150  0  48  316  265  533
## 7738 NP_001349068.1 XP_021331498.1  46.241  266 143  0  48  313  461  726
## 7739 NP_001349068.1 XP_021331498.1  45.896  268 145  0  48  315  209  476
## 7740 NP_001349068.1 XP_021331498.1  44.318  264 147  0  50  313  323  586
## 7741 NP_001349068.1 XP_021331498.1  43.985  266 149  0  48  313  349  614
## 7742 NP_001349068.1 XP_021331498.1  42.434  304 165  3  45  338  620  923
## 7743 NP_001349068.1 XP_021331498.1  44.361  266 148  0  48  313  293  558
## 7744 NP_001349068.1 XP_021331498.1  45.113  266 146  0  48  313  433  698
## 7745 NP_001349068.1 XP_021331498.1  44.487  263 146  0  48  310  489  751
## 7746 NP_001349068.1 XP_021331498.1  43.609  266 150  0  48  313  181  446
## 7747 NP_001349068.1 XP_021331498.1  45.703  256 139  0  58  313  107  362
## 7748 NP_001349068.1 XP_021331498.1  47.266  256 135  0  58  313  555  810
## 7749 NP_001349068.1 XP_021331498.1  46.591  264 141  0  50  313  743 1006
## 7750 NP_001349068.1 XP_021331498.1  44.737  266 147  0  48  313  125  390
## 7751 NP_001349068.1 XP_021331498.1  47.244  254 134  0  60  313  697  950
## 7752 NP_001349068.1 XP_021331498.1  42.244  303 162  3  44  333   53  355
## 7753 NP_001349068.1 XP_021331498.1  45.076  264 145  0  48  311  713  976
## 7754 NP_001349068.1 XP_021331498.1  45.417  240 130  1  49  288  798 1036
## 7755 NP_001349068.1 XP_017211078.1  46.988  249 132  0  63  311   80  328
## 7756 NP_001349068.1 XP_017211078.1  42.802  257 147  0  60  316  105  361
## 7757 NP_001349068.1 XP_017211078.1  48.444  225 116  0  91  315   80  304
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## 7758 NP_001349068.1 XP_017211078.1  40.755  265 157  0  48  312  121  385
## 7759 NP_001349068.1 XP_017211078.1  45.833  168  91  0 146  313   79  246
## 7760 NP_001349068.1 XP_017211078.1  40.764  157  85  1 167  315   64  220
## 7761 NP_001349068.1 XP_017211078.1  37.079   89  56  0  58  146  299  387
## 7762 NP_001349068.1 XP_017209821.1  45.490  255 138  1  60  314  102  355
## 7763 NP_001349068.1 XP_017209821.1  41.912  272 158  0  63  334   77  348
## 7764 NP_001349068.1 XP_017209821.1  44.298  228 126  1  58  285  128  354
## 7765 NP_001349068.1 XP_017209821.1  45.238  168  92  0 146  313   76  243
## 7766 NP_001349068.1 XP_017209820.1  45.490  255 138  1  60  314  102  355
## 7767 NP_001349068.1 XP_017209820.1  41.912  272 158  0  63  334   77  348
## 7768 NP_001349068.1 XP_017209820.1  44.298  228 126  1  58  285  128  354
## 7769 NP_001349068.1 XP_017209820.1  45.238  168  92  0 146  313   76  243
## 7770 NP_001349068.1 NP_001314833.1  42.574  303 172  1  11  313  158  458
## 7771 NP_001349068.1 NP_001314833.1  45.914  257 138  1  58  313  231  487
## 7772 NP_001349068.1 NP_001314833.1  45.600  250 135  1  58  306  259  508
## 7773 NP_001349068.1 NP_001314833.1  39.556  225 107  1  58  253  287  511
## 7774 NP_001349068.1 NP_001314833.1  48.837  129  66  0 188  316  193  321
## 7775 NP_001349068.1 NP_001314833.1  31.884   69  46  1  43  110  440  508
## 7776 NP_001349068.1 XP_017208888.1  44.574  258 143  0  58  315   84  341
## 7777 NP_001349068.1 XP_017208888.1  45.703  256 139  0  58  313  168  423
## 7778 NP_001349068.1 XP_017208888.1  44.922  256 141  0  58  313  112  367
## 7779 NP_001349068.1 XP_017208888.1  42.910  268 153  0  46  313  128  395
## 7780 NP_001349068.1 XP_017208888.1  40.580  276 156  2  38  313   44  311
## 7781 NP_001349068.1 XP_017208888.1  41.597  238 139  0  50  287  216  453
## 7782 NP_001349068.1 XP_017208888.1  40.000  175 105  0  58  232  280  454
## 7783 NP_001349068.1 XP_017208888.1  44.954  109  59  1 208  316   67  174
## 7784 NP_001349068.1 XP_017208888.1  44.444   99  55  0  49  147  355  453
## 7785 NP_001349068.1 XP_021331385.1  44.358  257 143  0  60  316  105  361
## 7786 NP_001349068.1 XP_021331385.1  46.185  249 134  0  63  311   80  328
## 7787 NP_001349068.1 XP_021331385.1  43.071  267 152  0  48  314  121  387
## 7788 NP_001349068.1 XP_021331385.1  47.111  225 119  0  91  315   80  304
## 7789 NP_001349068.1 XP_021331385.1  47.619  168  88  0 146  313   79  246
## 7790 NP_001349068.1 XP_021331385.1  45.223  157  78  1 167  315   64  220
## 7791 NP_001349068.1 XP_021331385.1  41.667  132  76  1 203  333   80  211
## 7792 NP_001349068.1 XP_017209848.1  45.736  258 140  0  58  315  101  358
## 7793 NP_001349068.1 XP_017209848.1  44.882  254 140  0  58  311  129  382
## 7794 NP_001349068.1 XP_017209848.1  44.223  251 140  0  63  313   78  328
## 7795 NP_001349068.1 XP_017209848.1  43.969  257 144  0  60  316  159  415
## 7796 NP_001349068.1 XP_017209848.1  40.467  257 153  0  58  314  185  441
## 7797 NP_001349068.1 XP_017209848.1  43.719  199 112  0 121  319   80  278
## 7798 NP_001349068.1 XP_017208612.1  43.911  271 152  0  46  316  111  381
## 7799 NP_001349068.1 XP_017208612.1  39.936  313 173  2  19  316   13  325
## 7800 NP_001349068.1 XP_017208612.1  45.660  265 144  0  49  313  142  406
## 7801 NP_001349068.1 XP_017208612.1  42.798  243 135  1  45  287  170  408
## 7802 NP_001349068.1 XP_017208611.1  43.911  271 152  0  46  316  111  381
## 7803 NP_001349068.1 XP_017208611.1  39.936  313 173  2  19  316   13  325
## 7804 NP_001349068.1 XP_017208611.1  45.660  265 144  0  49  313  142  406
## 7805 NP_001349068.1 XP_017208611.1  42.798  243 135  1  45  287  170  408
## 7806 NP_001349068.1 XP_017210830.1  42.751  269 154  0  48  316  123  391
## 7807 NP_001349068.1 XP_017210830.1  47.036  253 134  0  63  315   82  334
## 7808 NP_001349068.1 XP_017210830.1  45.525  257 140  0  56  312  159  415
## 7809 NP_001349068.1 XP_017210830.1  45.635  252 137  0  60  311  107  358
## 7810 NP_001349068.1 XP_017210830.1  42.941  170  97  0 146  315   81  250
## 7811 NP_001349068.1 XP_017210830.1  43.662  142  80  0 172  313   79  220
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## 7812 NP_001349068.1 XP_017210830.1  38.202   89  55  0  58  146  329  417
## 7813 NP_001349068.1 XP_017210895.1  45.349  258 141  0  58  315  101  358
## 7814 NP_001349068.1 XP_017210895.1  42.960  277 157  1  58  333  157  433
## 7815 NP_001349068.1 XP_017210895.1  45.817  251 136  0  63  313   78  328
## 7816 NP_001349068.1 XP_017210895.1  44.664  253 140  0  58  310  129  381
## 7817 NP_001349068.1 XP_017210895.1  40.392  255 152  0  60  314  187  441
## 7818 NP_001349068.1 XP_017210895.1  41.228  228 134  0  58  285  213  440
## 7819 NP_001349068.1 XP_017210895.1  40.083  242 116  3 121  333   80  321
## 7820 NP_001349068.1 XP_017210895.1  37.079   89  56  0  58  146  353  441
## 7821 NP_001349068.1 XP_017211131.1  46.586  249 133  0  63  311   82  330
## 7822 NP_001349068.1 XP_017211131.1  48.548  241 116  1  83  315   66  306
## 7823 NP_001349068.1 XP_017211131.1  40.449  267 159  0  48  314  123  389
## 7824 NP_001349068.1 XP_017211187.1  46.988  249 132  0  63  311   82  330
## 7825 NP_001349068.1 XP_017211187.1  40.226  266 159  0  48  313  123  388
## 7826 NP_001349068.1 XP_017211187.1  48.000  225 117  0  91  315   82  306
## 7827 NP_001349068.1 XP_017211187.1  42.262  168  97  0 146  313   81  248
## 7828 NP_001349068.1 XP_017211187.1  43.750  144  81  0 172  315   79  222
## 7829 NP_001349068.1 XP_017211187.1  35.955   89  57  0  58  146  301  389
## 7830 NP_001349068.1 XP_005158995.1  45.149  268 147  0  46  313   95  362
## 7831 NP_001349068.1 XP_005158995.1  44.444  252 140  0  65  316   86  337
## 7832 NP_001349068.1 XP_005158995.1  45.178  197 108  0 120  316   85  281
## 7833 NP_001349068.1 XP_005158995.1  42.636  129  73  1  43  171  261  388
## 7834 NP_001349068.1 XP_005158995.1  42.857   70  40  0  48  117  321  390
## 7835 NP_001349068.1 XP_021331152.1  45.276  254 139  0  63  316   82  335
## 7836 NP_001349068.1 XP_021331152.1  39.496  238 144  0  48  285  123  360
## 7837 NP_001349068.1 XP_021331152.1  48.214  168  87  0 146  313   81  248
## 7838 NP_001349068.1 XP_021331152.1  47.887  142  74  0 172  313   79  220
## 7839 NP_001349068.1 XP_021326627.1  47.191  267 141  0  47  313  176  442
## 7840 NP_001349068.1 XP_021326627.1  46.212  264 142  0  50  313  207  470
## 7841 NP_001349068.1 XP_021326627.1  46.494  271 144  1  46  316  232  501
## 7842 NP_001349068.1 XP_021326627.1  45.522  268 146  0  46  313  287  554
## 7843 NP_001349068.1 XP_021326627.1  48.221  253 131  0  61  313  162  414
## 7844 NP_001349068.1 XP_021326627.1  44.238  269 150  0  48  316   37  305
## 7845 NP_001349068.1 XP_021326627.1  45.455  264 144  0  50  313  263  526
## 7846 NP_001349068.1 XP_021326627.1  45.076  264 145  0  50  313  319  582
## 7847 NP_001349068.1 XP_021326627.1  43.411  258 146  0  56  313  101  358
## 7848 NP_001349068.1 XP_021326627.1  43.123  269 153  0  48  316   65  333
## 7849 NP_001349068.1 XP_021326627.1  42.910  268 153  0  49  316  122  389
## 7850 NP_001349068.1 XP_021326627.1  40.860  279 161  2  39  316    2  277
## 7851 NP_001349068.1 XP_021326627.1  45.492  244 132  1  43  286  341  583
## 7852 NP_001349068.1 XP_017211163.1  46.586  249 133  0  63  311   51  299
## 7853 NP_001349068.1 XP_017211163.1  40.449  267 159  0  48  314   92  358
## 7854 NP_001349068.1 XP_017211163.1  47.111  225 119  0  91  315   51  275
## 7855 NP_001349068.1 XP_017211163.1  41.634  257 150  0  60  316   76  332
## 7856 NP_001349068.1 XP_017211163.1  45.882  170  92  0 146  315   50  219
## 7857 NP_001349068.1 XP_017211163.1  41.718  163  94  1 172  333   48  210
## 7858 NP_001349068.1 XP_017210984.1  42.379  269 155  0  48  316  123  391
## 7859 NP_001349068.1 XP_017210984.1  47.036  253 134  0  63  315   82  334
## 7860 NP_001349068.1 XP_017210984.1  44.358  257 143  0  58  314  161  417
## 7861 NP_001349068.1 XP_017210984.1  45.238  252 138  0  60  311  107  358
## 7862 NP_001349068.1 XP_017210984.1  45.294  170  93  0 146  315   81  250
## 7863 NP_001349068.1 XP_017210984.1  39.773  176  97  2 167  333   66  241
## 7864 NP_001349068.1 XP_021325149.1  43.478  276 156  0  37  312    9  284
## 7865 NP_001349068.1 XP_021325149.1  41.880  234 136  0  83  316   27  260
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## 7866 NP_001349068.1 XP_021325149.1  46.392   97  52  0  50  146  190  286
## 7867 NP_001349068.1 XP_021331388.1  45.098  255 139  1  60  314  102  355
## 7868 NP_001349068.1 XP_021331388.1  42.279  272 157  0  63  334   77  348
## 7869 NP_001349068.1 XP_021331388.1  43.860  228 127  1  58  285  128  354
## 7870 NP_001349068.1 XP_021331388.1  45.238  168  92  0 146  313   76  243
## 7871 NP_001349068.1 XP_017211249.1  45.098  255 139  1  60  314  102  355
## 7872 NP_001349068.1 XP_017211249.1  42.279  272 157  0  63  334   77  348
## 7873 NP_001349068.1 XP_017211249.1  43.860  228 127  1  58  285  128  354
## 7874 NP_001349068.1 XP_017211249.1  45.238  168  92  0 146  313   76  243
## 7875 NP_001349068.1 XP_009301308.1  46.792  265 141  0  49  313   37  301
## 7876 NP_001349068.1 XP_009301308.1  46.512  258 138  0  59  316   19  276
## 7877 NP_001349068.1 XP_009301308.1  44.262  183 102  0  48  230  120  302
## 7878 NP_001349068.1 XP_003201690.2  46.792  265 141  0  49  313   37  301
## 7879 NP_001349068.1 XP_003201690.2  46.512  258 138  0  59  316   19  276
## 7880 NP_001349068.1 XP_003201690.2  44.262  183 102  0  48  230  120  302
## 7881 NP_001349068.1 XP_021324971.1  46.043  278 142  1  57  326   52  329
## 7882 NP_001349068.1 XP_021324971.1  41.700  247 136  1  49  287   72  318
## 7883 NP_001349068.1 XP_021324971.1  43.871  155  87  0  47  201  162  316
## 7884 NP_001349068.1 XP_021324970.1  46.043  278 142  1  57  326   52  329
## 7885 NP_001349068.1 XP_021324970.1  41.700  247 136  1  49  287   72  318
## 7886 NP_001349068.1 XP_021324970.1  43.871  155  87  0  47  201  162  316
## 7887 NP_001349068.1 XP_017210690.1  47.036  253 134  0  63  315   55  307
## 7888 NP_001349068.1 XP_017210690.1  42.379  269 155  0  48  316   96  364
## 7889 NP_001349068.1 XP_017210690.1  44.015  259 145  0  56  314  132  390
## 7890 NP_001349068.1 XP_017210690.1  45.635  252 137  0  60  311   80  331
## 7891 NP_001349068.1 XP_017210690.1  44.706  170  94  0 146  315   54  223
## 7892 NP_001349068.1 XP_017210690.1  40.491  163  96  1 172  333   52  214
## 7893 NP_001349068.1 XP_017210343.1  43.972  282 130  1  58  311   33  314
## 7894 NP_001349068.1 XP_017210343.1  45.882  255 138  0  59  313    6  260
## 7895 NP_001349068.1 XP_017210343.1  46.484  256 137  0  58  313  173  428
## 7896 NP_001349068.1 XP_017210343.1  47.244  254 134  0  60  313  119  372
## 7897 NP_001349068.1 XP_017210343.1  45.703  256 139  0  58  313  229  484
## 7898 NP_001349068.1 XP_017210343.1  41.791  268 156  0  49  316   80  347
## 7899 NP_001349068.1 XP_017210343.1  44.788  259 143  0  58  316  201  459
## 7900 NP_001349068.1 XP_017210343.1  44.488  254 141  0  58  311  257  510
## 7901 NP_001349068.1 XP_017210343.1  45.588  204 111  0 112  315    3  206
## 7902 NP_001349068.1 XP_017210343.1  45.270  148  81  0 166  313    1  148
## 7903 NP_001349068.1 XP_017210343.1  43.503  177 100  0  58  234  341  517
## 7904 NP_001349068.1 XP_017210343.1  51.020   98  48  0 224  321    3  100
## 7905 NP_001349068.1 XP_009297410.1  48.828  256 131  0  58  313  187  442
## 7906 NP_001349068.1 XP_009297410.1  45.896  268 145  0  49  316   94  361
## 7907 NP_001349068.1 XP_009297410.1  47.104  259 137  0  58  316  131  389
## 7908 NP_001349068.1 XP_009297410.1  46.718  259 138  0  58  316   75  333
## 7909 NP_001349068.1 XP_009297410.1  42.751  269 154  0  48  316   37  305
## 7910 NP_001349068.1 XP_009297410.1  44.815  270 149  0  47  316  148  417
## 7911 NP_001349068.1 XP_009297410.1  45.833  240 130  0  47  286  204  443
## 7912 NP_001349068.1 XP_009297410.1  44.664  253 140  0  61  313   22  274
## 7913 NP_001349068.1 XP_009297410.1  44.068  236 132  0  81  316   14  249
## 7914 NP_001349068.1 XP_009297410.1  48.092  131  64  1 186  316   11  137
## 7915 NP_001349068.1 XP_009297410.1  41.333   75  44  0 249  323   14   88
## 7916 NP_001349068.1 XP_017211221.1  46.988  249 132  0  63  311   82  330
## 7917 NP_001349068.1 XP_017211221.1  41.573  267 156  0  48  314  123  389
## 7918 NP_001349068.1 XP_017211221.1  41.634  257 150  0  60  316  107  363
## 7919 NP_001349068.1 XP_017211221.1  49.333  225 114  0  91  315   82  306
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## 7920 NP_001349068.1 XP_017211221.1  47.619  168  88  0 146  313   81  248
## 7921 NP_001349068.1 XP_017211221.1  42.667  150  86  0 166  315   73  222
## 7922 NP_001349068.1 XP_005161607.1  44.569  267 148  0  50  316   76  342
## 7923 NP_001349068.1 XP_005161607.1  44.238  269 150  0  48  316  102  370
## 7924 NP_001349068.1 XP_005161607.1  43.494  269 152  0  48  316   46  314
## 7925 NP_001349068.1 XP_005161607.1  45.382  249 136  0  65  313   35  283
## 7926 NP_001349068.1 XP_005161607.1  44.690  226 125  0  93  318   35  260
## 7927 NP_001349068.1 XP_005161607.1  43.939  198 111  0 116  313   30  227
## 7928 NP_001349068.1 XP_005161607.1  40.323  124  74  0  46  169  268  391
## 7929 NP_001349068.1 XP_009294102.1  44.569  267 148  0  50  316   76  342
## 7930 NP_001349068.1 XP_009294102.1  44.238  269 150  0  48  316  102  370
## 7931 NP_001349068.1 XP_009294102.1  43.494  269 152  0  48  316   46  314
## 7932 NP_001349068.1 XP_009294102.1  45.382  249 136  0  65  313   35  283
## 7933 NP_001349068.1 XP_009294102.1  44.690  226 125  0  93  318   35  260
## 7934 NP_001349068.1 XP_009294102.1  43.939  198 111  0 116  313   30  227
## 7935 NP_001349068.1 XP_009294102.1  40.323  124  74  0  46  169  268  391
## 7936 NP_001349068.1 XP_009294101.1  44.569  267 148  0  50  316   76  342
## 7937 NP_001349068.1 XP_009294101.1  44.238  269 150  0  48  316  102  370
## 7938 NP_001349068.1 XP_009294101.1  43.494  269 152  0  48  316   46  314
## 7939 NP_001349068.1 XP_009294101.1  45.382  249 136  0  65  313   35  283
## 7940 NP_001349068.1 XP_009294101.1  44.690  226 125  0  93  318   35  260
## 7941 NP_001349068.1 XP_009294101.1  43.939  198 111  0 116  313   30  227
## 7942 NP_001349068.1 XP_009294101.1  40.323  124  74  0  46  169  268  391
## 7943 NP_001349068.1 XP_021330691.1  43.333  300 170  0  14  313   23  322
## 7944 NP_001349068.1 XP_021330691.1  44.444  261 145  0  50  310   87  347
## 7945 NP_001349068.1 XP_021330691.1  44.358  257 141  1  58  314  123  377
## 7946 NP_001349068.1 XP_021330691.1  42.857  210 118  1  48  257  169  376
## 7947 NP_001349068.1 XP_021330691.1  42.857  182 102  1 137  318   64  243
## 7948 NP_001349068.1 XP_021330691.1  42.623   61  35  0 259  319   72  132
## 7949 NP_001349068.1 NP_001013514.1  43.542  271 153  0  46  316  110  380
## 7950 NP_001349068.1 NP_001013514.1  43.446  267 151  0  50  316   58  324
## 7951 NP_001349068.1 NP_001013514.1  45.660  265 144  0  49  313  141  405
## 7952 NP_001349068.1 NP_001013514.1  46.718  259 138  0  58  316   94  352
## 7953 NP_001349068.1 NP_001013514.1  43.060  281 153  2  42  316   17  296
## 7954 NP_001349068.1 NP_001013514.1  42.387  243 136  1  45  287  169  407
## 7955 NP_001349068.1 XP_021323881.1  46.642  268 143  0  46  313  623  890
## 7956 NP_001349068.1 XP_021323881.1  45.556  270 147  0  46  315  132  401
## 7957 NP_001349068.1 XP_021323881.1  45.423  284 154  1  47  329   49  332
## 7958 NP_001349068.1 XP_021323881.1  46.853  286 146  1  36  315  551  836
## 7959 NP_001349068.1 XP_021323881.1  46.899  258 137  0  58  315  719  976
## 7960 NP_001349068.1 XP_021323881.1  46.350  274 147  0  46  319  595  868
## 7961 NP_001349068.1 XP_021323881.1  45.788  273 147  1  58  329  551  823
## 7962 NP_001349068.1 XP_021323881.1  45.865  266 144  0  48  313  162  427
## 7963 NP_001349068.1 XP_021323881.1  44.526  274 152  0  46  319  104  377
## 7964 NP_001349068.1 XP_021323881.1  46.094  256 138  0  58  313  200  455
## 7965 NP_001349068.1 XP_021323881.1  45.489  266 145  0  48  313  653  918
## 7966 NP_001349068.1 XP_021323881.1  44.030  268 150  0  46  313  679  946
## 7967 NP_001349068.1 XP_021323881.1  47.674  258 135  0  58  315   88  345
## 7968 NP_001349068.1 XP_021323881.1  40.753  292 169  1  46  337  216  503
## 7969 NP_001349068.1 XP_021323881.1  45.490  255 139  0  61  315  526  780
## 7970 NP_001349068.1 XP_021323881.1  45.455  253 138  0  63  315   37  289
## 7971 NP_001349068.1 XP_021323881.1  38.538  301 142  1  58  315  452  752
## 7972 NP_001349068.1 XP_021323881.1  47.034  236 123  1  82  315   26  261
## 7973 NP_001349068.1 XP_021323881.1  45.852  229 124  0  58  286  775 1003
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## 7974 NP_001349068.1 XP_021323881.1  35.783  313 158  1  49  318  359  671
## 7975 NP_001349068.1 XP_021323881.1  33.968  315 165  1  47  318  273  587
## 7976 NP_001349068.1 XP_021323881.1  42.180  211 122  0  48  258  793 1003
## 7977 NP_001349068.1 XP_021323881.1  42.857  210 118  1 111  318   27  236
## 7978 NP_001349068.1 NP_001289569.1  46.063  254 137  0  60  313   90  343
## 7979 NP_001349068.1 NP_001289569.1  38.710  186 114  0  47  232  161  346
## 7980 NP_001349068.1 NP_001289569.1  43.548  124  70  0 195  318   57  180
## 7981 NP_001349068.1 NP_001289569.1  40.984   61  36  0 259  319   65  125
## 7982 NP_001349068.1 NP_001103952.2  46.063  254 137  0  60  313   97  350
## 7983 NP_001349068.1 NP_001103952.2  38.710  186 114  0  47  232  168  353
## 7984 NP_001349068.1 NP_001103952.2  43.548  124  70  0 195  318   64  187
## 7985 NP_001349068.1 NP_001103952.2  40.984   61  36  0 259  319   72  132
## 7986 NP_001349068.1 XP_017209854.1  46.988  249 132  0  63  311   82  330
## 7987 NP_001349068.1 XP_017209854.1  49.333  225 114  0  91  315   82  306
## 7988 NP_001349068.1 XP_017209854.1  39.850  266 160  0  48  313  123  388
## 7989 NP_001349068.1 XP_017209854.1  43.452  168  95  0 146  313   81  248
## 7990 NP_001349068.1 XP_017209854.1  44.444  144  80  0 172  315   79  222
## 7991 NP_001349068.1 XP_017209854.1  34.831   89  58  0  58  146  301  389
## 7992 NP_001349068.1 XP_009294140.1  41.613  310 172  2   6  314  122  423
## 7993 NP_001349068.1 XP_009294140.1  44.944  267 147  0  47  313  184  450
## 7994 NP_001349068.1 XP_009294140.1  42.803  264 151  0  50  313   75  338
## 7995 NP_001349068.1 XP_009294140.1  41.833  251 146  0  61  311   58  308
## 7996 NP_001349068.1 XP_009294140.1  40.984  244 144  0  70  313   39  282
## 7997 NP_001349068.1 XP_009294140.1  41.872  203  90  1  58  232  251  453
## 7998 NP_001349068.1 XP_009294140.1  40.845   71  42  0 246  316   47  117
## 7999 NP_001349068.1 XP_021331129.1  44.275  262 146  0  50  311   92  353
## 8000 NP_001349068.1 XP_021331129.1  43.243  259 147  0  58  316  128  386
## 8001 NP_001349068.1 XP_021331129.1  43.802  242 136  0  74  315   88  329
## 8002 NP_001349068.1 XP_021331129.1  40.784  255 151  0  60  314  158  412
## 8003 NP_001349068.1 XP_021331129.1  42.222  225 130  0  58  282  184  408
## 8004 NP_001349068.1 XP_021331129.1  43.379  219 124  0  98  316   84  302
## 8005 NP_001349068.1 XP_021331129.1  38.525  122  75  0  48  169  286  407
## 8006 NP_001349068.1 XP_021331384.1  42.379  269 155  0  48  316  121  389
## 8007 NP_001349068.1 XP_021331384.1  47.036  253 134  0  63  315   80  332
## 8008 NP_001349068.1 XP_021331384.1  44.358  257 143  0  58  314  159  415
## 8009 NP_001349068.1 XP_021331384.1  45.238  252 138  0  60  311  105  356
## 8010 NP_001349068.1 XP_021331384.1  44.706  170  94  0 146  315   79  248
## 8011 NP_001349068.1 XP_021331384.1  39.205  176  98  2 167  333   64  239
## 8012 NP_001349068.1 XP_009291588.1  45.783  249 135  0  65  313   64  312
## 8013 NP_001349068.1 XP_009291588.1  41.549  284 166  0   2  285   29  312
## 8014 NP_001349068.1 XP_009291588.1  48.223  197 102  0 120  316   63  259
## 8015 NP_001349068.1 XP_009291588.1  39.888  178  73  3  58  204  141  315
## 8016 NP_001349068.1 XP_009291588.1  45.238  126  69  0 188  313   47  172
## 8017 NP_001349068.1 XP_009291588.1  30.233   43  30  0  49   91  272  314
## 8018 NP_001349068.1 XP_009291587.1  45.783  249 135  0  65  313   64  312
## 8019 NP_001349068.1 XP_009291587.1  41.549  284 166  0   2  285   29  312
## 8020 NP_001349068.1 XP_009291587.1  48.223  197 102  0 120  316   63  259
## 8021 NP_001349068.1 XP_009291587.1  39.888  178  73  3  58  204  141  315
## 8022 NP_001349068.1 XP_009291587.1  45.238  126  69  0 188  313   47  172
## 8023 NP_001349068.1 XP_009291587.1  30.233   43  30  0  49   91  272  314
## 8024 NP_001349068.1 XP_017208652.1  44.853  272 150  0  42  313  142  413
## 8025 NP_001349068.1 XP_017208652.1  45.312  256 140  0  58  313  186  441
## 8026 NP_001349068.1 XP_017208652.1  43.511  262 148  0  50  311  206  467
## 8027 NP_001349068.1 XP_017208652.1  45.703  256 139  0  58  313  242  497
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## 8028 NP_001349068.1 XP_017208652.1  44.651  215  99  2 119  313   87  301
## 8029 NP_001349068.1 XP_021327374.1  46.642  268 143  0  47  314  177  444
## 8030 NP_001349068.1 XP_021327374.1  48.375  277 142  1  58  333  384  660
## 8031 NP_001349068.1 XP_021327374.1  45.693  267 145  0  47  313  345  611
## 8032 NP_001349068.1 XP_021327374.1  46.992  266 141  0  48  313  150  415
## 8033 NP_001349068.1 XP_021327374.1  47.451  255 134  0  59  313  329  583
## 8034 NP_001349068.1 XP_021327374.1  47.244  254 134  0  58  311  440  693
## 8035 NP_001349068.1 XP_021327374.1  45.489  266 145  0  48  313   38  303
## 8036 NP_001349068.1 XP_021327374.1  45.635  252 137  0  60  311   78  329
## 8037 NP_001349068.1 XP_021327374.1  45.882  255 138  0  60  314   22  276
## 8038 NP_001349068.1 XP_021327374.1  44.922  256 141  0  58  313  104  359
## 8039 NP_001349068.1 XP_021327374.1  45.038  262 144  0  49  310  487  748
## 8040 NP_001349068.1 XP_021327374.1  45.076  264 145  0  50  313  292  555
## 8041 NP_001349068.1 XP_021327374.1  42.754  276 152  1  44  313  448  723
## 8042 NP_001349068.1 XP_021327374.1  47.234  235 120  1  83  313   13  247
## 8043 NP_001349068.1 XP_021327374.1  42.197  173 100  0 144  316   22  194
## 8044 NP_001349068.1 XP_021327374.1  38.806   67  41  0  48  114  682  748
## 8045 NP_001349068.1 NP_001104697.1  46.332  259 139  0  58  316    5  263
## 8046 NP_001349068.1 NP_001104697.1  46.552  232 124  0  82  313    1  232
## 8047 NP_001349068.1 NP_001104697.1  44.809  183 101  0  47  229  106  288
## 8048 NP_001349068.1 XP_021325148.1  46.008  263 142  0  50  312   49  311
## 8049 NP_001349068.1 XP_021325148.1  44.269  253 141  0  61  313   32  284
## 8050 NP_001349068.1 XP_021325148.1  44.253  174  97  0 143  316   30  203
## 8051 NP_001349068.1 XP_021325148.1  41.270  126  74  0 190  315   21  146
## 8052 NP_001349068.1 XP_021325148.1  51.429   35  17  0 285  319   32   66
## 8053 NP_001349068.1 XP_021327400.1  46.332  259 139  0  58  316   48  306
## 8054 NP_001349068.1 XP_021327400.1  44.697  264 145  1  51  313   12  275
## 8055 NP_001349068.1 XP_021327400.1  44.809  183 101  0  47  229  149  331
## 8056 NP_001349068.1 XP_017210930.1  45.098  255 139  1  60  314  102  355
## 8057 NP_001349068.1 XP_017210930.1  41.544  272 159  0  63  334   77  348
## 8058 NP_001349068.1 XP_017210930.1  43.860  228 127  1  58  285  128  354
## 8059 NP_001349068.1 XP_017210930.1  43.452  168  95  0 146  313   76  243
## 8060 NP_001349068.1 XP_021331031.1  48.918  231 118  0  60  290   33  263
## 8061 NP_001349068.1 XP_021331031.1  47.479  238 122  1  81  315   23  260
## 8062 NP_001349068.1 XP_021331031.1  50.000  206 103  0  56  261   57  262
## 8063 NP_001349068.1 XP_021331031.1  47.685  216 112  1 119  333   36  251
## 8064 NP_001349068.1 XP_021331031.1  48.344  151  78  0  56  206  113  263
## 8065 NP_001349068.1 XP_009301276.1  45.896  268 145  0  49  316   39  306
## 8066 NP_001349068.1 XP_009301276.1  40.714  280 138  1  58  309   76  355
## 8067 NP_001349068.1 XP_009301276.1  43.874  253 142  0  61  313   23  275
## 8068 NP_001349068.1 XP_009301276.1  43.590  234 132  0  48  281  122  355
## 8069 NP_001349068.1 XP_009301276.1  41.618  173 101  0 144  316   22  194
## 8070 NP_001349068.1 XP_009301276.1  40.769  130  73  1 182  311    8  133
## 8071 NP_001349068.1 XP_009301276.1  43.802  121  68  0  50  170  236  356
## 8072 NP_001349068.1 XP_009301276.1  34.043   47  31  0 270  316    8   54
## 8073 NP_001349068.1 XP_021325064.1  45.833  264 143  0  50  313  217  480
## 8074 NP_001349068.1 XP_021325064.1  45.833  264 143  0  50  313  105  368
## 8075 NP_001349068.1 XP_021325064.1  44.186  258 144  0  58  315  169  426
## 8076 NP_001349068.1 XP_021325064.1  41.825  263 153  0  48  310  271  533
## 8077 NP_001349068.1 XP_021325064.1  43.478  253 143  0  61  313   60  312
## 8078 NP_001349068.1 XP_021325064.1  41.636  269 157  0  48  316   75  343
## 8079 NP_001349068.1 XP_021325064.1  42.797  236 135  0  47  282  298  533
## 8080 NP_001349068.1 XP_021325064.1  42.920  226 129  0  86  311   57  282
## 8081 NP_001349068.1 XP_021325064.1  43.353  173  98  0 142  314   57  229
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## 8082 NP_001349068.1 XP_017208849.1  45.489  266 145  0  50  315  217  482
## 8083 NP_001349068.1 XP_017208849.1  45.833  264 143  0  50  313  105  368
## 8084 NP_001349068.1 XP_017208849.1  44.186  258 144  0  58  315  169  426
## 8085 NP_001349068.1 XP_017208849.1  41.729  266 155  0  48  313  271  536
## 8086 NP_001349068.1 XP_017208849.1  43.478  253 143  0  61  313   60  312
## 8087 NP_001349068.1 XP_017208849.1  41.636  269 157  0  48  316   75  343
## 8088 NP_001349068.1 XP_017208849.1  42.739  241 138  0  47  287  298  538
## 8089 NP_001349068.1 XP_017208849.1  42.920  226 129  0  86  311   57  282
## 8090 NP_001349068.1 XP_017208849.1  43.169  183 104  0  50  232  357  539
## 8091 NP_001349068.1 XP_017208849.1  43.353  173  98  0 142  314   57  229
## 8092 NP_001349068.1 XP_017208849.1  39.785   93  56  0 226  318   57  149
## 8093 NP_001349068.1 XP_017210824.1  44.706  255 140  1  60  314  102  355
## 8094 NP_001349068.1 XP_017210824.1  42.279  272 157  0  63  334   77  348
## 8095 NP_001349068.1 XP_017210824.1  44.298  228 126  1  58  285  128  354
## 8096 NP_001349068.1 XP_017210824.1  45.833  168  91  0 146  313   76  243
## 8097 NP_001349068.1 XP_017209950.1  45.896  268 145  0  49  316   39  306
## 8098 NP_001349068.1 XP_017209950.1  41.071  280 137  1  58  309   76  355
## 8099 NP_001349068.1 XP_017209950.1  43.529  255 144  0  59  313   21  275
## 8100 NP_001349068.1 XP_017209950.1  42.000  150  87  0  48  197  206  355
## 8101 NP_001349068.1 XP_017209950.1  43.802  121  68  0  50  170  236  356
## 8102 NP_001349068.1 XP_017209950.1  44.118   34  19  0 283  316   21   54
## 8103 NP_001349068.1 XP_017210008.1  42.434  304 163  1  29  320    7  310
## 8104 NP_001349068.1 XP_017210008.1  40.000  280 166  1  37  316    1  278
## 8105 NP_001349068.1 XP_017211189.1  45.600  250 136  0  63  312   82  331
## 8106 NP_001349068.1 XP_017211189.1  42.023  257 148  1  58  314  105  360
## 8107 NP_001349068.1 XP_017211189.1  44.444  171  95  0 146  316   81  251
## 8108 NP_001349068.1 XP_017211189.1  42.945  163  92  1 172  333   79  241
## 8109 NP_001349068.1 XP_009294078.1  40.273  293 147  1  47  311  130  422
## 8110 NP_001349068.1 XP_009294078.1  46.245  253 136  0  61  313   60  312
## 8111 NP_001349068.1 XP_009294078.1  41.667  264 154  0  50  313  189  452
## 8112 NP_001349068.1 XP_009294078.1  41.199  267 157  0  47  313  102  368
## 8113 NP_001349068.1 XP_009294078.1  40.283  283 168  1  47  329  214  495
## 8114 NP_001349068.1 XP_009294078.1  40.467  257 151  1  46  302  241  495
## 8115 NP_001349068.1 XP_009294078.1  44.253  174  97  0 142  315   57  230
## 8116 NP_001349068.1 XP_021322226.1  43.841  276 149  1  44  313  347  622
## 8117 NP_001349068.1 XP_021322226.1  44.615  260 144  0  56  315  113  372
## 8118 NP_001349068.1 XP_021322226.1  42.069  290 162  1  30  313   53  342
## 8119 NP_001349068.1 XP_021322226.1  43.023  258 147  0  56  313  141  398
## 8120 NP_001349068.1 XP_021322226.1  44.574  258 143  0  56  313  421  678
## 8121 NP_001349068.1 XP_021322226.1  44.574  258 143  0  56  313  197  454
## 8122 NP_001349068.1 XP_021322226.1  44.488  254 141  0  60  313  341  594
## 8123 NP_001349068.1 XP_021322226.1  39.860  286 144  1  58  315  255  540
## 8124 NP_001349068.1 XP_021322226.1  41.473  258 151  0  56  313  309  566
## 8125 NP_001349068.1 XP_021322226.1  42.969  256 146  0  58  313  171  426
## 8126 NP_001349068.1 XP_021322226.1  41.339  254 149  0  58  311  227  480
## 8127 NP_001349068.1 XP_021322226.1  46.552  232 124  0  58  289  451  682
## 8128 NP_001349068.1 XP_021322226.1  38.436  307 140  1  56  313  505  811
## 8129 NP_001349068.1 XP_021322226.1  37.241  290 133  1  56  296  561  850
## 8130 NP_001349068.1 XP_021322226.1  41.364  220 129  0  65  284 1097 1316
## 8131 NP_001349068.1 XP_021322226.1  35.690  297 143  1  65  313  909 1205
## 8132 NP_001349068.1 XP_021322226.1  41.441  222 130  0  93  314 1097 1318
## 8133 NP_001349068.1 XP_021322226.1  37.063  286 160  3  48  313  976 1261
## 8134 NP_001349068.1 XP_021322226.1  35.172  290 150  2  56  307  750 1039
## 8135 NP_001349068.1 XP_021322226.1  30.747  348 148  4  56  313  589  933
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## 8136 NP_001349068.1 XP_021322226.1  28.329  353 166  2  48  313  637  989
## 8137 NP_001349068.1 XP_021322226.1  37.931   87  54  0  58  144 1230 1316
## 8138 NP_001349068.1 XP_021322226.1  34.211   76  47  1  42  117 1245 1317
## 8139 NP_001349068.1 XP_017210034.1  46.586  249 133  0  63  311   82  330
## 8140 NP_001349068.1 XP_017210034.1  48.444  225 116  0  91  315   82  306
## 8141 NP_001349068.1 XP_017210034.1  40.226  266 159  0  48  313  123  388
## 8142 NP_001349068.1 XP_017210034.1  44.048  168  94  0 146  313   81  248
## 8143 NP_001349068.1 XP_017210034.1  44.444  144  80  0 172  315   79  222
## 8144 NP_001349068.1 XP_017210034.1  35.955   89  57  0  58  146  301  389
## 8145 NP_001349068.1 XP_009297415.1  46.296  270 145  0  47  316  203  472
## 8146 NP_001349068.1 XP_009297415.1  43.885  278 154  1  39  316  253  528
## 8147 NP_001349068.1 XP_009297415.1  44.275  262 146  0  49  310  289  550
## 8148 NP_001349068.1 XP_009297415.1  37.771  323 147  2  48  316   38  360
## 8149 NP_001349068.1 XP_009297415.1  45.339  236 129  0  47  282  315  550
## 8150 NP_001349068.1 XP_009297415.1  40.000  285 145  1  58  316  132  416
## 8151 NP_001349068.1 XP_009297415.1  42.012  169  96  1 143  311   21  187
## 8152 NP_001349068.1 XP_009297415.1  43.103  116  66  0 199  314   21  136
## 8153 NP_001349068.1 XP_005174571.3  41.297  293 149  2  39  311    6  295
## 8154 NP_001349068.1 XP_005174571.3  41.797  256 148  1  59  314   99  353
## 8155 NP_001349068.1 XP_005174571.3  41.732  254 148  0  60  313   72  325
## 8156 NP_001349068.1 XP_005174571.3  42.439  205 114  1 116  316   40  244
## 8157 NP_001349068.1 XP_005174571.3  39.109  202 122  1  56  257  152  352
## 8158 NP_001349068.1 XP_005174571.3  42.405  158  83  2 167  316   31  188
## 8159 NP_001349068.1 XP_017211093.2  42.322  267 154  0  50  316   96  362
## 8160 NP_001349068.1 XP_017211093.2  44.578  249 138  0  63  311   81  329
## 8161 NP_001349068.1 XP_017211093.2  43.629  259 146  0  56  314  130  388
## 8162 NP_001349068.1 XP_017211093.2  48.430  223 115  0  91  313   81  303
## 8163 NP_001349068.1 XP_017211093.2  43.386  189 106  1 146  333   80  268
## 8164 NP_001349068.1 NP_001103337.1  45.600  250 136  0  63  312   82  331
## 8165 NP_001349068.1 NP_001103337.1  42.023  257 148  1  58  314  105  360
## 8166 NP_001349068.1 NP_001103337.1  43.860  171  96  0 146  316   81  251
## 8167 NP_001349068.1 NP_001103337.1  42.331  163  93  1 172  333   79  241
## 8168 NP_001349068.1 XP_021325072.1  47.656  256 134  0  58  313  116  371
## 8169 NP_001349068.1 XP_021325072.1  43.939  264 148  0  50  313  192  455
## 8170 NP_001349068.1 XP_021325072.1  44.105  229 128  0  58  286  228  456
## 8171 NP_001349068.1 XP_021325072.1  42.857  196 112  0 116  311   90  285
## 8172 NP_001349068.1 XP_021325072.1  43.062  209 119  0  50  258  248  456
## 8173 NP_001349068.1 XP_021325072.1  42.690  171  98  0 143  313   89  259
## 8174 NP_001349068.1 XP_021331357.1  38.344  326 177  3  29  333   21  343
## 8175 NP_001349068.1 XP_021331357.1  42.412  257 147  1  58  314   96  351
## 8176 NP_001349068.1 XP_021331357.1  35.294   68  43  1  49  116  283  349
## 8177 NP_001349068.1 XP_021333299.1  52.315  216 103  0  68  283  104  319
## 8178 NP_001349068.1 XP_021333299.1  50.691  217 107  0  95  311  103  319
## 8179 NP_001349068.1 XP_021333299.1  53.535  198  92  0  58  255  122  319
## 8180 NP_001349068.1 XP_021333299.1  54.082  196  90  0 124  319  104  299
## 8181 NP_001349068.1 XP_021333299.1  53.374  163  76  0 151  313  103  265
## 8182 NP_001349068.1 XP_017210035.1  46.586  249 133  0  63  311   82  330
## 8183 NP_001349068.1 XP_017210035.1  40.977  266 157  0  48  313  123  388
## 8184 NP_001349068.1 XP_017210035.1  48.000  225 117  0  91  315   82  306
## 8185 NP_001349068.1 XP_017210035.1  42.857  168  96  0 146  313   81  248
## 8186 NP_001349068.1 XP_017210035.1  43.750  144  81  0 172  315   79  222
## 8187 NP_001349068.1 XP_017210035.1  35.955   89  57  0  58  146  301  389
## 8188 NP_001349068.1 XP_017211087.1  46.586  249 133  0  63  311   82  330
## 8189 NP_001349068.1 XP_017211087.1  48.889  225 115  0  91  315   82  306
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## 8190 NP_001349068.1 XP_017211087.1  41.569  255 149  0  60  314  135  389
## 8191 NP_001349068.1 XP_017211087.1  42.982  228 130  0  58  285  161  388
## 8192 NP_001349068.1 XP_017211087.1  44.643  168  93  0 146  313   81  248
## 8193 NP_001349068.1 XP_017211087.1  43.750  144  81  0 172  315   79  222
## 8194 NP_001349068.1 XP_017211087.1  41.346  104  60  1 231  333   82  185
## 8195 NP_001349068.1 XP_017211087.1  37.079   89  56  0  58  146  301  389
## 8196 NP_001349068.1 XP_005168517.1  48.047  256 133  0  58  313   76  331
## 8197 NP_001349068.1 XP_005168517.1  41.481  270 158  0  47  316   37  306
## 8198 NP_001349068.1 XP_005168517.1  43.561  264 148  1  51  313   12  275
## 8199 NP_001349068.1 XP_005168517.1  40.807  223 132  0  49  271  123  345
## 8200 NP_001349068.1 XP_005168517.1  45.625  160  87  0  58  217  188  347
## 8201 NP_001349068.1 NP_001108190.1  45.600  250 136  0  63  312   82  331
## 8202 NP_001349068.1 NP_001108190.1  42.023  257 148  1  58  314  105  360
## 8203 NP_001349068.1 NP_001108190.1  44.444  171  95  0 146  316   81  251
## 8204 NP_001349068.1 NP_001108190.1  42.945  163  92  1 172  333   79  241
## 8205 NP_001349068.1 XP_021330571.1  45.600  250 136  0  63  312   82  331
## 8206 NP_001349068.1 XP_021330571.1  42.023  257 148  1  58  314  105  360
## 8207 NP_001349068.1 XP_021330571.1  44.444  171  95  0 146  316   81  251
## 8208 NP_001349068.1 XP_021330571.1  42.945  163  92  1 172  333   79  241
## 8209 NP_001349068.1 NP_001083044.1  47.566  267 132  2  57  315   52  318
## 8210 NP_001349068.1 NP_001083044.1  41.700  247 136  2  49  287   72  318
## 8211 NP_001349068.1 NP_001083044.1  43.226  155  88  0  47  201  162  316
## 8212 NP_001349068.1 NP_001083044.1  29.412   51  36  0  50  100  277  327
## 8213 NP_001349068.1 XP_021325074.1  47.287  258 136  0  58  315   81  338
## 8214 NP_001349068.1 XP_021325074.1  43.774  265 149  0  49  313  156  420
## 8215 NP_001349068.1 XP_021325074.1  44.105  229 128  0  58  286  193  421
## 8216 NP_001349068.1 XP_021325074.1  42.857  196 112  0 116  311   55  250
## 8217 NP_001349068.1 XP_021325074.1  43.062  209 119  0  50  258  213  421
## 8218 NP_001349068.1 XP_021325074.1  42.690  171  98  0 143  313   54  224
## 8219 NP_001349068.1 XP_002661836.5  44.094  254 142  0  63  316   82  335
## 8220 NP_001349068.1 XP_002661836.5  41.406  256 150  0  58  313  105  360
## 8221 NP_001349068.1 XP_002661836.5  45.238  168  92  0 146  313   81  248
## 8222 NP_001349068.1 NP_001348404.1  42.069  290 161  2  30  313   47  335
## 8223 NP_001349068.1 XP_021323880.1  44.483  290 156  2  46  334  484  769
## 8224 NP_001349068.1 XP_021323880.1  44.649  271 150  0  46  316   21  291
## 8225 NP_001349068.1 XP_021323880.1  45.985  274 148  0  46  319  456  729
## 8226 NP_001349068.1 XP_021323880.1  43.750  288 161  1  47  333  401  688
## 8227 NP_001349068.1 XP_021323880.1  46.484  256 137  0  58  313    5  260
## 8228 NP_001349068.1 XP_021323880.1  45.703  256 139  0  58  313  552  807
## 8229 NP_001349068.1 XP_021323880.1  45.113  266 146  0  48  313  514  779
## 8230 NP_001349068.1 XP_021323880.1  47.287  258 136  0  58  315  440  697
## 8231 NP_001349068.1 XP_021323880.1  45.882  255 138  0  58  312   61  315
## 8232 NP_001349068.1 XP_021323880.1  42.910  268 153  0  46  313   77  344
## 8233 NP_001349068.1 XP_021323880.1  49.138  232 118  0  82  313    1  232
## 8234 NP_001349068.1 XP_021323880.1  44.151  265 148  0  51  315  377  641
## 8235 NP_001349068.1 XP_021323880.1  42.324  241 139  0  46  286  568  808
## 8236 NP_001349068.1 XP_021323880.1  35.370  311 158  1  46  313  245  555
## 8237 NP_001349068.1 XP_021323880.1  37.742  310 150  1  47  313  106  415
## 8238 NP_001349068.1 XP_021323880.1  35.987  314 158  1  48  318  135  448
## 8239 NP_001349068.1 XP_021323880.1  37.829  304 146  2  58  318  285  588
## 8240 NP_001349068.1 XP_021323880.1  47.929  169  87  1 166  333    1  169
## 8241 NP_001349068.1 XP_021322225.1  47.287  258 136  0  58  315  607  864
## 8242 NP_001349068.1 XP_021322225.1  41.748  309 166  2  19  313  414  722
## 8243 NP_001349068.1 XP_021322225.1  43.662  284 159  1  47  329  736 1019
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## 8244 NP_001349068.1 XP_021322225.1  44.186  258 144  0  58  315  495  752
## 8245 NP_001349068.1 XP_021322225.1  42.636  258 148  0  58  315  663  920
## 8246 NP_001349068.1 XP_021322225.1  43.969  257 144  0  59  315  720  976
## 8247 NP_001349068.1 XP_021322225.1  42.537  268 154  0  48  315  541  808
## 8248 NP_001349068.1 XP_021322225.1  41.045  268 158  0  48  315  681  948
## 8249 NP_001349068.1 XP_021322225.1  44.186  258 144  0  58  315  803 1060
## 8250 NP_001349068.1 XP_021322225.1  43.023  258 147  0  58  315  523  780
## 8251 NP_001349068.1 XP_021322225.1  42.688  253 145  0  61  313  582  834
## 8252 NP_001349068.1 XP_021322225.1  42.023  257 149  0  59  315  776 1032
## 8253 NP_001349068.1 XP_021322225.1  42.481  266 153  0  50  315  851 1116
## 8254 NP_001349068.1 XP_021322225.1  38.095  336 196  3  25  353   61  391
## 8255 NP_001349068.1 XP_021322225.1  37.162  296 158  1  48  315  877 1172
## 8256 NP_001349068.1 XP_021322225.1  39.394  264 160  0  48  311  933 1196
## 8257 NP_001349068.1 XP_021322225.1  39.841  251 140  3  71  318   35  277
## 8258 NP_001349068.1 XP_021322178.1  46.484  256 137  0  58  313   50  305
## 8259 NP_001349068.1 XP_021322178.1  44.574  258 143  0  58  315  162  419
## 8260 NP_001349068.1 XP_021322178.1  46.215  251 135  0  65  315   29  279
## 8261 NP_001349068.1 XP_021322178.1  44.238  269 150  0  50  318  126  394
## 8262 NP_001349068.1 XP_021322178.1  42.180  211  94  1  50  232  210  420
## 8263 NP_001349068.1 XP_005161011.1  41.254  303 165  3  24  313   24  326
## 8264 NP_001349068.1 XP_005161011.1  44.355  248 138  0  63  310  104  351
## 8265 NP_001349068.1 XP_005161011.1  44.889  225 124  0  58  282  127  351
## 8266 NP_001349068.1 XP_005161011.1  43.820  178  99  1 143  319   43  220
## 8267 NP_001349068.1 XP_005161011.1  43.182  132  71  2 188  315   29  160
## 8268 NP_001349068.1 XP_005161011.1  42.268   97  56  0  50  146  259  355
## 8269 NP_001349068.1 XP_005161011.1  34.211   38  25  0  49   86  314  351
## 8270 NP_001349068.1 XP_017211883.2  45.455  264 144  0  48  311   32  295
## 8271 NP_001349068.1 XP_017211883.2  45.660  265 144  0  49  313   89  353
## 8272 NP_001349068.1 XP_017211883.2  46.058  241 126  1  46  286  118  354
## 8273 NP_001349068.1 XP_017211883.2  45.614  228 124  0  87  314   15  242
## 8274 NP_001349068.1 XP_017211883.2  46.512  172  92  0 144  315   16  187
## 8275 NP_001349068.1 XP_017211883.2  48.936  141  72  0 176  316   20  160
## 8276 NP_001349068.1 XP_005164989.2  45.385  260 138  1  60  315  105  364
## 8277 NP_001349068.1 XP_005164989.2  42.308  260 146  1  58  313   75  334
## 8278 NP_001349068.1 XP_005164989.2  44.538  238 128  2  58  291  131  368
## 8279 NP_001349068.1 XP_005164989.2  44.681  188 100  1  48  231  177  364
## 8280 NP_001349068.1 XP_005164989.2  43.353  173  98  0 146  318   51  223
## 8281 NP_001349068.1 XP_005170427.2  45.318  267 146  0  49  315   76  342
## 8282 NP_001349068.1 XP_005170427.2  44.622  251 139  0  61  311   60  310
## 8283 NP_001349068.1 XP_005170427.2  43.182  220 125  0  93  312   64  283
## 8284 NP_001349068.1 XP_005170427.2  45.876  194 105  0 120  313   63  256
## 8285 NP_001349068.1 XP_005170427.2  45.029  171  94  0 145  315   60  230
## 8286 NP_001349068.1 XP_005170427.2  38.462  117  44  1  58  146  253  369
## 8287 NP_001349068.1 XP_017211088.1  46.185  249 134  0  63  311   82  330
## 8288 NP_001349068.1 XP_017211088.1  48.000  225 117  0  91  315   82  306
## 8289 NP_001349068.1 XP_017211088.1  40.449  267 159  0  48  314  123  389
## 8290 NP_001349068.1 XP_017211088.1  43.452  168  95  0 146  313   81  248
## 8291 NP_001349068.1 XP_017211088.1  43.750  144  81  0 172  315   79  222
## 8292 NP_001349068.1 XP_009294081.2  45.455  264 144  0  50  313  105  368
## 8293 NP_001349068.1 XP_009294081.2  41.447  304 172  1  16  313   37  340
## 8294 NP_001349068.1 XP_009294081.2  41.844  282 157  1   6  287  124  398
## 8295 NP_001349068.1 XP_009294081.2  46.328  177  95  0  56  232  223  399
## 8296 NP_001349068.1 XP_009294081.2  33.846   65  43  0 254  318   57  121
## 8297 NP_001349068.1 XP_017206615.1  42.069  290 161  2  30  313   74  362
```

```
## 8298 NP_001349068.1 XP_009294100.1  46.304  257 138  0  58  314   70  326
## 8299 NP_001349068.1 XP_009294100.1  41.700  247 144  0  65  311   21  267
## 8300 NP_001349068.1 XP_009294100.1  44.690  226 125  0  93  318   21  246
## 8301 NP_001349068.1 XP_009294100.1  43.655  197 111  0 120  316   20  216
## 8302 NP_001349068.1 XP_017211314.1  46.185  249 134  0  65  313   82  330
## 8303 NP_001349068.1 XP_017211314.1  43.946  223 125  0  93  315   82  304
## 8304 NP_001349068.1 XP_017211314.1  42.500  200 115  0  58  257  131  330
## 8305 NP_001349068.1 XP_017211314.1  40.458  131  77  1 204  333   81  211
## 8306 NP_001349068.1 XP_017211314.1  39.623  106  63  1 231  335   80  185
## 8307 NP_001349068.1 XP_017211314.1  41.667   96  56  0  50  145  235  330
## 8308 NP_001349068.1 XP_017211314.1  38.095   42  26  0  48   89  289  330
## 8309 NP_001349068.1 XP_003201694.1  46.185  249 134  0  65  313   82  330
## 8310 NP_001349068.1 XP_003201694.1  43.946  223 125  0  93  315   82  304
## 8311 NP_001349068.1 XP_003201694.1  42.500  200 115  0  58  257  131  330
## 8312 NP_001349068.1 XP_003201694.1  40.458  131  77  1 204  333   81  211
## 8313 NP_001349068.1 XP_003201694.1  39.623  106  63  1 231  335   80  185
## 8314 NP_001349068.1 XP_003201694.1  41.667   96  56  0  50  145  235  330
## 8315 NP_001349068.1 XP_003201694.1  38.095   42  26  0  48   89  289  330
## 8316 NP_001349068.1 XP_017211136.2  44.094  254 142  0  63  316   71  324
## 8317 NP_001349068.1 XP_017211136.2  40.625  256 152  0  58  313   94  349
## 8318 NP_001349068.1 XP_017211136.2  44.643  168  93  0 146  313   70  237
## 8319 NP_001349068.1 XP_001334166.2  45.020  251 138  0  63  313   82  332
## 8320 NP_001349068.1 XP_001334166.2  43.805  226 127  0  91  316   82  307
## 8321 NP_001349068.1 XP_001334166.2  40.952  210 124  0  48  257  123  332
## 8322 NP_001349068.1 XP_001334166.2  42.408  191 109  1 146  335   81  271
## 8323 NP_001349068.1 XP_001334166.2  45.775  142  77  0 172  313   79  220
## 8324 NP_001349068.1 XP_001334166.2  35.955   89  57  0  58  146  245  333
## 8325 NP_001349068.1 XP_009289655.2  41.196  301 170  2  19  313   75  374
## 8326 NP_001349068.1 XP_021327023.1  43.273  275 156  0  48  322   37  311
## 8327 NP_001349068.1 XP_021327023.1  44.269  253 141  0  61  313   22  274
## 8328 NP_001349068.1 XP_021327023.1  41.228  228 128  1  39  260   78  305
## 8329 NP_001349068.1 XP_021327023.1  53.704   54  25  0 261  314   26   79
## 8330 NP_001349068.1 XP_017210201.2  44.610  269 148  1  48  316   37  304
## 8331 NP_001349068.1 XP_017210201.2  44.531  256 141  1  61  316   22  276
## 8332 NP_001349068.1 XP_017210201.2  42.718  206 111  1  49  254  149  347
## 8333 NP_001349068.1 XP_021329630.1  44.610  269 148  1  48  316   37  304
##      X1.24e.150  X426
## 1      8.62e-92 279.0
## 2      5.14e-06  49.7
## 3      1.00e-01  35.8
## 4      0.00e+00 877.0
## 5      6.70e+00  29.3
## 6      7.50e+00  29.6
## 7     2.97e-127 360.0
## 8      1.80e+00  31.2
## 9      1.90e+00  31.2
## 10     2.10e+00  30.8
## 11     8.00e-02  31.2
## 12     8.30e-02  31.2
## 13     1.00e+00  28.1
## 14     7.70e+00  25.4
## 15     8.00e+00  25.4
## 16     2.18e-65 202.0
## 17    3.61e-146 410.0
```

```
## 18     1.60e+00  31.6
## 19     1.70e+00  31.6
## 20     8.40e+00  29.3
## 21     2.53e-43 138.0
## 22     5.73e-29 100.0
## 23     6.50e+00  26.9
## 24     6.70e+00  26.9
## 25     1.00e+01  26.6
## 26     0.00e+00 572.0
## 27     1.32e-05  48.9
## 28     1.30e+00  32.7
## 29     7.30e+00  30.8
## 30     0.00e+00 617.0
## 31     1.51e-09  62.0
## 32     1.17e-06  52.4
## 33     1.90e+00  33.1
## 34     2.40e+00  32.7
## 35     4.20e+00  32.0
## 36     8.40e+00  31.2
## 37     2.34e-20  84.0
## 38     5.40e+00  28.9
## 39     0.00e+00 588.0
## 40     4.80e+00  30.8
## 41     4.80e+00  30.8
## 42     5.60e+00  30.4
## 43     5.60e+00  30.4
## 44    1.24e-150 426.0
## 45     8.62e-92 279.0
## 46     5.14e-06  49.7
## 47     1.00e-01  35.8
## 48     0.00e+00 877.0
## 49     6.70e+00  29.3
## 50     7.50e+00  29.6
## 51    2.97e-127 360.0
## 52     1.80e+00  31.2
## 53     1.90e+00  31.2
## 54     2.10e+00  30.8
## 55     8.00e-02  31.2
## 56     8.30e-02  31.2
## 57     1.00e+00  28.1
## 58     7.70e+00  25.4
## 59     8.00e+00  25.4
## 60     2.18e-65 202.0
## 61    3.61e-146 410.0
## 62     1.60e+00  31.6
## 63     1.70e+00  31.6
## 64     8.40e+00  29.3
## 65     2.53e-43 138.0
## 66     5.73e-29 100.0
## 67     6.50e+00  26.9
## 68     6.70e+00  26.9
## 69     1.00e+01  26.6
## 70     0.00e+00 572.0
## 71     1.32e-05  48.9
```

```
## 72     1.30e+00  32.7
## 73     7.30e+00  30.8
## 74     0.00e+00 617.0
## 75     1.51e-09  62.0
## 76     1.17e-06  52.4
## 77     1.90e+00  33.1
## 78     2.40e+00  32.7
## 79     4.20e+00  32.0
## 80     8.40e+00  31.2
## 81     2.34e-20  84.0
## 82     5.40e+00  28.9
## 83     0.00e+00 588.0
## 84     4.80e+00  30.8
## 85     4.80e+00  30.8
## 86     5.60e+00  30.4
## 87     5.60e+00  30.4
## 88     1.69e-63 214.0
## 89     4.51e-63 214.0
## 90     4.69e-63 214.0
## 91     5.19e-12  67.8
## 92     2.66e-11  65.5
## 93     4.40e-01  33.9
## 94     1.70e-10  63.2
## 95     4.00e-03  40.0
## 96     5.00e-03  40.0
## 97     2.28e-09  59.7
## 98     8.80e+00  29.6
## 99     1.65e-06  50.8
## 100    4.00e-03  40.0
## 101    4.04e-05  46.6
## 102    1.44e-04  44.7
## 103    1.00e-03  41.2
## 104    1.80e-02  38.5
## 105    2.10e-02  37.7
## 106    2.20e+00  31.2
## 107    2.40e-02  37.7
## 108    4.70e+00  30.4
## 109    2.70e-02  37.4
## 110    2.50e-01  34.3
## 111    7.20e-02  36.2
## 112    8.90e-02  35.8
## 113    2.50e-01  34.7
## 114    1.50e-01  35.0
## 115    2.70e-01  34.3
## 116    2.80e-01  33.5
## 117    3.70e-01  33.9
## 118    3.90e-01  33.9
## 119    4.80e-01  33.5
## 120    9.90e-01  32.7
## 121    1.30e+00  32.7
## 122    1.30e+00  32.3
## 123    1.60e+00  32.3
## 124    1.60e+00  32.3
## 125    1.60e+00  32.3
```

```
## 126    1.60e+00  32.3
## 127    1.70e+00  32.0
## 128    1.70e+00  32.3
## 129    1.70e+00  32.3
## 130    1.80e+00  32.0
## 131    1.80e+00  32.0
## 132    2.00e+00  32.0
## 133    2.40e+00  31.6
## 134    2.40e+00  31.6
## 135    2.60e+00  31.2
## 136    2.60e+00  31.2
## 137    2.70e+00  31.2
## 138    3.30e+00  31.2
## 139    4.00e+00  30.4
## 140    9.00e+00  29.6
## 141    9.50e+00  29.6
## 142    9.80e+00  29.6
## 143    1.74e-11  67.4
## 144    2.27e-09  60.8
## 145    5.00e-03  40.8
## 146    9.00e-03  40.0
## 147    6.20e-02  37.4
## 148    6.80e-02  37.0
## 149    7.10e-02  37.0
## 150    9.00e-01  33.5
## 151    3.30e-01  35.0
## 152    4.60e-01  34.7
## 153    6.70e+00  30.8
## 154    5.20e-01  34.3
## 155    5.50e-01  33.9
## 156    5.90e-01  33.9
## 157    6.70e-01  33.9
## 158    7.70e-01  33.5
## 159    8.40e-01  33.5
## 160    8.60e-01  33.5
## 161    9.40e-01  33.5
## 162    1.00e+00  33.5
## 163    1.00e+00  33.1
## 164    1.00e+00  33.5
## 165    1.00e+00  33.1
## 166    1.10e+00  33.1
## 167    1.20e+00  33.1
## 168    4.00e+00  31.6
## 169    6.80e+00  30.4
## 170    7.00e+00  30.8
## 171    7.10e+00  30.8
## 172    7.40e+00  30.8
## 173    7.50e+00  30.4
## 174    7.80e+00  30.4
## 175    7.80e+00  30.4
## 176    7.90e+00  30.4
## 177    8.00e+00  30.4
## 178    8.00e+00  30.4
## 179    8.00e+00  30.4
```

```
## 180    8.10e+00  30.4
## 181    8.20e+00  30.4
## 182    8.30e+00  30.4
## 183    8.30e+00  30.4
## 184    8.40e+00  30.4
## 185    8.70e+00  30.4
## 186    8.80e+00  30.4
## 187    8.80e+00  30.4
## 188    3.45e-61 203.0
## 189    1.89e-57 194.0
## 190    2.42e-53 183.0
## 191    3.61e-53 182.0
## 192    3.62e-52 180.0
## 193    1.17e-50 176.0
## 194    1.34e-50 176.0
## 195    1.61e-50 175.0
## 196    1.04e-41 152.0
## 197    3.51e-60 204.0
## 198    6.46e-53 185.0
## 199    1.85e-52 184.0
## 200    3.82e-52 183.0
## 201    6.74e-52 182.0
## 202    7.63e-52 182.0
## 203    1.78e-51 181.0
## 204    3.69e-51 180.0
## 205    4.27e-51 180.0
## 206    6.78e-51 179.0
## 207    5.58e-49 174.0
## 208    4.24e-47 169.0
## 209    2.95e-45 164.0
## 210    1.47e-41 154.0
## 211    8.59e-19  89.0
## 212    5.86e-60 196.0
## 213    6.77e-56 186.0
## 214    2.74e-55 184.0
## 215    3.90e-55 184.0
## 216    9.20e-37 136.0
## 217    8.03e-60 201.0
## 218    5.57e-59 198.0
## 219    4.35e-54 186.0
## 220    7.75e-54 185.0
## 221    3.17e-53 183.0
## 222    2.74e-37 140.0
## 223    3.19e-28 115.0
## 224    8.03e-60 201.0
## 225    5.57e-59 198.0
## 226    4.35e-54 186.0
## 227    7.75e-54 185.0
## 228    3.17e-53 183.0
## 229    2.74e-37 140.0
## 230    3.19e-28 115.0
## 231    1.11e-59 197.0
## 232    4.68e-57 190.0
## 233    1.01e-53 181.0
```

```
## 234    1.90e-51 176.0
## 235    7.54e-43 153.0
## 236    4.52e-26 108.0
## 237    6.67e-04  42.7
## 238    1.67e-59 205.0
## 239    9.73e-54 189.0
## 240    2.51e-52 185.0
## 241    4.91e-52 184.0
## 242    3.54e-51 182.0
## 243    4.29e-51 182.0
## 244    6.29e-51 181.0
## 245    2.81e-50 180.0
## 246    6.14e-49 176.0
## 247    9.95e-49 175.0
## 248    8.89e-48 173.0
## 249    5.12e-46 168.0
## 250    1.15e-45 167.0
## 251    1.49e-45 167.0
## 252    2.88e-45 166.0
## 253    6.85e-39 148.0
## 254    3.60e-24 105.0
## 255    3.18e-59 199.0
## 256    1.88e-53 184.0
## 257    2.02e-53 184.0
## 258    3.11e-53 183.0
## 259    1.72e-52 181.0
## 260    1.87e-52 181.0
## 261    2.10e-52 181.0
## 262    1.34e-49 174.0
## 263    6.33e-48 169.0
## 264    1.50e-45 163.0
## 265    1.04e-40 150.0
## 266    2.46e-37 141.0
## 267    3.22e-59 197.0
## 268    4.47e-55 186.0
## 269    4.61e-54 183.0
## 270    1.94e-52 179.0
## 271    1.62e-51 177.0
## 272    2.59e-51 176.0
## 273    5.36e-20  91.7
## 274    4.37e-05  46.6
## 275    2.00e-03  41.2
## 276    4.47e-59 199.0
## 277    9.70e-55 187.0
## 278    6.37e-54 185.0
## 279    1.62e-53 184.0
## 280    2.60e-53 184.0
## 281    2.74e-53 184.0
## 282    4.54e-53 183.0
## 283    2.62e-52 181.0
## 284    1.68e-49 174.0
## 285    9.12e-48 169.0
## 286    3.53e-43 157.0
## 287    3.14e-37 140.0
```

```
## 288    6.06e-59 199.0
## 289    7.62e-55 188.0
## 290    3.24e-54 187.0
## 291    3.48e-53 184.0
## 292    3.75e-53 184.0
## 293    5.58e-53 183.0
## 294    3.13e-52 181.0
## 295    3.86e-52 181.0
## 296    1.19e-49 174.0
## 297    1.20e-49 174.0
## 298    2.30e-49 174.0
## 299    1.03e-45 164.0
## 300    7.49e-41 151.0
## 301    3.45e-37 141.0
## 302    6.06e-59 199.0
## 303    1.27e-55 190.0
## 304    4.70e-55 189.0
## 305    3.56e-53 184.0
## 306    3.67e-53 184.0
## 307    5.64e-53 183.0
## 308    3.30e-52 181.0
## 309    4.11e-52 181.0
## 310    4.87e-50 176.0
## 311    1.19e-49 174.0
## 312    2.30e-49 174.0
## 313    3.16e-46 165.0
## 314    6.91e-42 154.0
## 315    3.59e-37 141.0
## 316    6.25e-59 199.0
## 317    1.73e-54 187.0
## 318    3.56e-53 184.0
## 319    3.87e-53 184.0
## 320    5.88e-53 183.0
## 321    3.41e-52 181.0
## 322    3.86e-52 181.0
## 323    5.53e-51 178.0
## 324    1.16e-49 174.0
## 325    2.28e-49 174.0
## 326    1.55e-46 166.0
## 327    2.95e-45 163.0
## 328    1.00e-39 148.0
## 329    3.65e-37 141.0
## 330    2.80e-02  37.7
## 331    8.34e-59 200.0
## 332    7.24e-55 190.0
## 333    2.20e-50 178.0
## 334    1.70e-49 176.0
## 335    1.94e-49 175.0
## 336    4.60e-48 172.0
## 337    1.74e-43 159.0
## 338    5.18e-42 155.0
## 339    1.14e-40 151.0
## 340    1.83e-32 129.0
## 341    2.52e-18  87.8
```

```
## 342    8.34e-59 200.0
## 343    7.24e-55 190.0
## 344    2.20e-50 178.0
## 345    1.70e-49 176.0
## 346    1.94e-49 175.0
## 347    4.60e-48 172.0
## 348    1.74e-43 159.0
## 349    5.18e-42 155.0
## 350    1.14e-40 151.0
## 351    1.83e-32 129.0
## 352    2.52e-18  87.8
## 353    9.69e-59 202.0
## 354    6.81e-53 187.0
## 355    6.11e-52 184.0
## 356    1.65e-51 183.0
## 357    2.60e-51 182.0
## 358    5.23e-51 182.0
## 359    3.99e-50 179.0
## 360    4.41e-50 179.0
## 361    5.38e-49 176.0
## 362    1.81e-47 172.0
## 363    1.83e-47 172.0
## 364    2.66e-47 171.0
## 365    2.58e-46 169.0
## 366    4.64e-44 162.0
## 367    6.89e-43 159.0
## 368    3.48e-29 120.0
## 369    9.90e+00  29.6
## 370    1.09e-58 204.0
## 371    2.97e-57 200.0
## 372    3.85e-53 189.0
## 373    2.19e-52 186.0
## 374    3.80e-52 186.0
## 375    4.65e-51 183.0
## 376    1.86e-49 178.0
## 377    2.48e-49 178.0
## 378    4.96e-49 177.0
## 379    7.52e-49 177.0
## 380    1.71e-47 173.0
## 381    1.60e-46 170.0
## 382    4.91e-46 169.0
## 383    2.84e-43 161.0
## 384    1.03e-34 136.0
## 385    1.74e-58 206.0
## 386    4.42e-56 199.0
## 387    1.09e-54 195.0
## 388    2.22e-54 194.0
## 389    4.91e-54 193.0
## 390    7.92e-54 192.0
## 391    8.23e-54 192.0
## 392    8.55e-54 192.0
## 393    1.12e-53 192.0
## 394    1.56e-53 192.0
## 395    2.35e-53 191.0
```

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## 396    3.58e-53 191.0
## 397    3.87e-53 191.0
## 398    6.00e-53 190.0
## 399    7.20e-53 190.0
## 400    1.30e-52 189.0
## 401    1.75e-52 189.0
## 402    2.29e-52 188.0
## 403    2.61e-52 188.0
## 404    2.69e-52 188.0
## 405    3.35e-52 188.0
## 406    7.83e-52 187.0
## 407    8.22e-52 187.0
## 408    9.57e-52 186.0
## 409    1.12e-51 186.0
## 410    2.42e-51 185.0
## 411    2.53e-51 185.0
## 412    3.86e-51 185.0
## 413    4.20e-51 184.0
## 414    5.98e-51 184.0
## 415    6.58e-51 184.0
## 416    6.64e-51 184.0
## 417    7.17e-51 184.0
## 418    8.60e-51 184.0
## 419    1.13e-50 183.0
## 420    1.14e-50 183.0
## 421    1.58e-50 183.0
## 422    2.48e-50 182.0
## 423    3.03e-50 182.0
## 424    3.70e-50 182.0
## 425    4.11e-50 182.0
## 426    4.23e-50 182.0
## 427    1.62e-49 180.0
## 428    2.27e-49 179.0
## 429    2.49e-49 179.0
## 430    2.54e-49 179.0
## 431    2.79e-49 179.0
## 432    3.07e-49 179.0
## 433    5.00e-49 179.0
## 434    5.45e-49 179.0
## 435    5.99e-49 178.0
## 436    6.16e-49 178.0
## 437    6.47e-49 178.0
## 438    6.53e-49 178.0
## 439    7.75e-49 178.0
## 440    9.03e-49 178.0
## 441    1.24e-48 177.0
## 442    1.88e-48 177.0
## 443    3.39e-48 176.0
## 444    3.77e-48 176.0
## 445    9.59e-48 175.0
## 446    1.17e-47 174.0
## 447    1.40e-47 174.0
## 448    1.92e-47 174.0
## 449    2.28e-47 174.0
```

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## 450    7.87e-47 172.0
## 451    1.98e-46 171.0
## 452    1.12e-45 169.0
## 453    2.49e-45 168.0
## 454    2.66e-45 168.0
## 455    6.33e-45 167.0
## 456    4.04e-44 164.0
## 457    4.20e-44 164.0
## 458    4.67e-42 158.0
## 459    4.85e-34 135.0
## 460    2.12e-58 199.0
## 461    2.44e-54 188.0
## 462    5.77e-54 187.0
## 463    1.06e-52 184.0
## 464    1.11e-52 184.0
## 465    1.43e-52 184.0
## 466    1.93e-52 183.0
## 467    5.12e-52 182.0
## 468    1.07e-51 181.0
## 469    1.22e-51 181.0
## 470    3.56e-49 174.0
## 471    6.20e-49 174.0
## 472    8.83e-48 171.0
## 473    9.50e-44 160.0
## 474    3.07e-42 155.0
## 475    7.71e-37 141.0
## 476    2.34e-58 199.0
## 477    6.48e-54 187.0
## 478    1.19e-52 184.0
## 479    1.26e-52 184.0
## 480    2.10e-52 183.0
## 481    6.63e-52 182.0
## 482    1.17e-51 181.0
## 483    1.40e-51 181.0
## 484    1.33e-50 178.0
## 485    3.85e-49 174.0
## 486    6.92e-49 174.0
## 487    9.44e-48 171.0
## 488    2.53e-40 150.0
## 489    8.54e-37 140.0
## 490    3.40e-58 199.0
## 491    6.54e-55 190.0
## 492    3.00e-54 189.0
## 493    8.46e-54 187.0
## 494    1.65e-52 184.0
## 495    2.85e-52 183.0
## 496    1.56e-51 181.0
## 497    1.86e-51 181.0
## 498    4.66e-51 180.0
## 499    9.78e-51 179.0
## 500    5.33e-49 174.0
## 501    1.15e-48 174.0
## 502    9.02e-48 171.0
## 503    1.15e-47 171.0
```

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## 504    9.58e-40 149.0
## 505    2.51e-18  87.8
## 506    3.65e-58 196.0
## 507    1.28e-56 191.0
## 508    1.40e-53 184.0
## 509    1.70e-49 173.0
## 510    8.00e-02  36.2
## 511    3.68e-58 196.0
## 512    9.20e-57 192.0
## 513    2.38e-56 191.0
## 514    7.55e-55 187.0
## 515    3.41e-54 185.0
## 516    1.49e-52 181.0
## 517    5.24e-50 174.0
## 518    1.39e-47 167.0
## 519    4.26e-18  86.3
## 520    3.69e-58 198.0
## 521    6.58e-57 195.0
## 522    2.59e-56 193.0
## 523    5.98e-56 192.0
## 524    1.32e-55 191.0
## 525    8.39e-55 189.0
## 526    9.79e-53 184.0
## 527    2.03e-50 177.0
## 528    4.67e-45 163.0
## 529    6.63e-42 154.0
## 530    3.99e-40 149.0
## 531    7.38e-29 118.0
## 532    4.22e-58 195.0
## 533    4.20e-57 193.0
## 534    2.56e-56 191.0
## 535    6.91e-55 187.0
## 536    3.90e-54 185.0
## 537    1.77e-52 181.0
## 538    9.10e-51 176.0
## 539    4.63e-50 174.0
## 540    1.10e-32 127.0
## 541    3.71e-18  86.7
## 542    4.66e-58 197.0
## 543    2.28e-52 182.0
## 544    6.38e-52 181.0
## 545    4.40e-51 179.0
## 546    1.51e-50 178.0
## 547    4.67e-50 176.0
## 548    2.39e-49 174.0
## 549    1.29e-41 154.0
## 550    7.54e-58 196.0
## 551    7.39e-52 180.0
## 552    3.65e-51 178.0
## 553    1.91e-47 168.0
## 554    9.71e-47 166.0
## 555    1.59e-43 158.0
## 556    9.79e-58 189.0
## 557    3.54e-49 166.0
```

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## 558    1.60e-45 157.0
## 559    1.15e-36 134.0
## 560    1.08e-57 195.0
## 561    5.85e-55 188.0
## 562    8.54e-55 187.0
## 563    1.18e-54 187.0
## 564    5.67e-54 185.0
## 565    1.11e-53 184.0
## 566    1.30e-53 184.0
## 567    3.79e-51 178.0
## 568    6.56e-46 164.0
## 569    9.73e-46 163.0
## 570    2.78e-19  90.1
## 571    1.42e-57 193.0
## 572    4.64e-54 184.0
## 573    2.85e-53 182.0
## 574    1.42e-52 180.0
## 575    2.37e-51 177.0
## 576    2.65e-48 169.0
## 577    5.49e-45 160.0
## 578    1.54e-57 194.0
## 579    9.00e-52 179.0
## 580    1.50e-49 173.0
## 581    3.84e-47 166.0
## 582    1.16e-30 122.0
## 583    2.90e+00  31.2
## 584    1.65e-57 189.0
## 585    7.83e-52 174.0
## 586    1.05e-49 169.0
## 587    2.28e-57 192.0
## 588    6.12e-57 191.0
## 589    9.93e-55 185.0
## 590    8.55e-54 182.0
## 591    5.88e-38 140.0
## 592    2.35e-57 189.0
## 593    8.00e-54 181.0
## 594    5.46e-53 178.0
## 595    4.95e-51 173.0
## 596    5.35e-46 160.0
## 597    2.48e-57 201.0
## 598    8.01e-56 197.0
## 599    1.02e-55 197.0
## 600    4.23e-55 195.0
## 601    1.18e-54 194.0
## 602    7.25e-54 192.0
## 603    7.25e-53 189.0
## 604    2.61e-52 187.0
## 605    9.48e-52 186.0
## 606    1.23e-51 185.0
## 607    1.30e-51 185.0
## 608    1.70e-51 185.0
## 609    2.64e-51 184.0
## 610    5.12e-51 184.0
## 611    8.93e-51 183.0
```

```
## 612    9.58e-50 180.0
## 613    2.26e-45 167.0
## 614    7.94e-42 157.0
## 615    1.93e-39 150.0
## 616    2.70e-57 192.0
## 617    6.39e-51 176.0
## 618    7.77e-50 172.0
## 619    7.56e-48 167.0
## 620    3.95e-46 163.0
## 621    1.19e-44 159.0
## 622    2.71e-57 192.0
## 623    8.61e-54 182.0
## 624    2.48e-52 179.0
## 625    6.23e-47 164.0
## 626    2.71e-57 192.0
## 627    8.61e-54 182.0
## 628    2.48e-52 179.0
## 629    6.23e-47 164.0
## 630    2.71e-57 192.0
## 631    8.61e-54 182.0
## 632    2.48e-52 179.0
## 633    6.23e-47 164.0
## 634    2.71e-57 192.0
## 635    8.61e-54 182.0
## 636    2.48e-52 179.0
## 637    6.23e-47 164.0
## 638    2.81e-57 189.0
## 639    5.13e-55 184.0
## 640    4.99e-53 178.0
## 641    3.95e-52 176.0
## 642    3.35e-49 168.0
## 643    3.11e-44 155.0
## 644    8.04e-30 117.0
## 645    2.88e-57 194.0
## 646    1.42e-55 190.0
## 647    7.01e-55 188.0
## 648    4.08e-54 186.0
## 649    8.95e-54 186.0
## 650    4.21e-53 184.0
## 651    8.73e-52 180.0
## 652    5.15e-51 178.0
## 653    1.01e-50 177.0
## 654    4.06e-48 171.0
## 655    7.89e-45 162.0
## 656    5.42e-43 157.0
## 657    2.13e-19  90.5
## 658    3.03e-57 190.0
## 659    1.13e-56 188.0
## 660    6.45e-55 184.0
## 661    2.15e-52 177.0
## 662    4.53e-52 176.0
## 663    7.19e-47 162.0
## 664    1.45e-30 119.0
## 665    2.24e-16  80.1
```

```
## 666    3.30e-57 191.0
## 667    1.94e-53 181.0
## 668    5.20e-53 180.0
## 669    1.62e-46 163.0
## 670    9.61e-45 159.0
## 671    3.36e-57 196.0
## 672    6.32e-56 192.0
## 673    1.34e-53 186.0
## 674    1.72e-53 186.0
## 675    8.79e-53 184.0
## 676    2.02e-52 183.0
## 677    1.78e-51 181.0
## 678    1.04e-50 178.0
## 679    1.87e-50 177.0
## 680    1.64e-49 175.0
## 681    1.08e-47 170.0
## 682    2.50e-37 142.0
## 683    1.09e-27 115.0
## 684    3.54e-57 194.0
## 685    1.35e-55 189.0
## 686    2.26e-53 184.0
## 687    6.80e-52 180.0
## 688    2.56e-48 170.0
## 689    1.21e-44 160.0
## 690    5.60e-27 112.0
## 691    4.34e-57 199.0
## 692    1.58e-56 197.0
## 693    4.61e-56 196.0
## 694    1.26e-55 195.0
## 695    5.68e-55 193.0
## 696    3.37e-53 188.0
## 697    3.54e-53 188.0
## 698    7.04e-53 187.0
## 699    1.05e-52 187.0
## 700    1.19e-52 186.0
## 701    1.43e-52 186.0
## 702    2.72e-52 186.0
## 703    2.75e-52 186.0
## 704    3.63e-48 174.0
## 705    1.45e-45 167.0
## 706    5.40e-41 154.0
## 707    4.44e-57 188.0
## 708    3.04e-48 165.0
## 709    4.37e-45 157.0
## 710    4.26e-38 139.0
## 711    5.00e-25 103.0
## 712    5.89e-57 191.0
## 713    1.09e-51 177.0
## 714    2.34e-48 169.0
## 715    1.40e-47 167.0
## 716    1.65e-21  96.3
## 717    5.96e-57 192.0
## 718    2.10e-56 191.0
## 719    1.56e-54 186.0
```

```
## 720    8.51e-53 182.0
## 721    1.49e-52 181.0
## 722    1.87e-51 178.0
## 723    7.56e-51 176.0
## 724    5.49e-49 172.0
## 725    1.52e-41 152.0
## 726    1.70e-34 132.0
## 727    6.26e-57 194.0
## 728    5.95e-49 173.0
## 729    3.90e-47 168.0
## 730    8.81e-47 167.0
## 731    2.33e-46 166.0
## 732    5.95e-46 165.0
## 733    9.66e-37 140.0
## 734    6.78e-57 189.0
## 735    2.31e-51 174.0
## 736    6.85e-57 192.0
## 737    3.00e-55 187.0
## 738    4.83e-54 184.0
## 739    2.07e-53 182.0
## 740    1.71e-52 180.0
## 741    6.83e-48 168.0
## 742    6.75e-32 125.0
## 743    6.95e-57 185.0
## 744    1.77e-53 176.0
## 745    7.68e-57 191.0
## 746    8.26e-50 172.0
## 747    5.32e-48 168.0
## 748    6.98e-46 162.0
## 749    3.84e-30 120.0
## 750    7.73e-57 190.0
## 751    1.29e-56 189.0
## 752    5.21e-56 187.0
## 753    6.19e-54 182.0
## 754    8.19e-57 190.0
## 755    2.22e-51 176.0
## 756    4.63e-50 172.0
## 757    3.94e-43 154.0
## 758    9.70e-57 190.0
## 759    1.53e-56 189.0
## 760    2.40e-56 189.0
## 761    2.63e-54 184.0
## 762    4.53e-49 170.0
## 763    3.36e-37 139.0
## 764    7.20e-02  36.2
## 765    1.40e+00  32.3
## 766    9.72e-57 189.0
## 767    1.13e-56 189.0
## 768    3.86e-52 177.0
## 769    7.17e-36 134.0
## 770    3.31e-35 132.0
## 771    9.72e-57 189.0
## 772    1.13e-56 189.0
## 773    3.86e-52 177.0
```

```
## 774    7.17e-36 134.0
## 775    3.31e-35 132.0
## 776    9.72e-57 189.0
## 777    1.13e-56 189.0
## 778    3.86e-52 177.0
## 779    7.17e-36 134.0
## 780    3.31e-35 132.0
## 781    1.15e-56 201.0
## 782    6.33e-54 192.0
## 783    1.88e-53 191.0
## 784    2.46e-51 185.0
## 785    6.32e-51 184.0
## 786    7.94e-51 184.0
## 787    9.99e-51 183.0
## 788    1.10e-50 183.0
## 789    1.13e-50 183.0
## 790    1.70e-50 182.0
## 791    5.25e-50 181.0
## 792    1.39e-49 180.0
## 793    2.61e-49 179.0
## 794    6.15e-49 178.0
## 795    1.05e-48 177.0
## 796    1.13e-48 177.0
## 797    1.52e-48 177.0
## 798    5.61e-48 175.0
## 799    1.14e-47 174.0
## 800    1.71e-47 174.0
## 801    1.68e-46 171.0
## 802    2.95e-46 170.0
## 803    4.70e-46 170.0
## 804    1.96e-45 168.0
## 805    1.59e-44 165.0
## 806    2.03e-43 162.0
## 807    3.33e-43 161.0
## 808    3.49e-41 155.0
## 809    1.23e-39 151.0
## 810    6.60e+00  30.4
## 811    1.38e-56 190.0
## 812    2.85e-54 184.0
## 813    1.03e-51 177.0
## 814    2.25e-50 174.0
## 815    2.69e-42 152.0
## 816    1.44e-56 190.0
## 817    5.39e-52 178.0
## 818    3.07e-50 174.0
## 819    9.99e-50 172.0
## 820    3.05e-49 171.0
## 821    6.13e-45 160.0
## 822    1.71e-21  95.9
## 823    7.00e+00  30.0
## 824    1.63e-56 190.0
## 825    2.42e-49 171.0
## 826    1.71e-47 167.0
## 827    7.91e-30 119.0
```

```
## 828    1.64e-56 191.0
## 829    1.15e-53 184.0
## 830    4.97e-52 179.0
## 831    1.77e-50 176.0
## 832    2.72e-49 172.0
## 833    1.46e-47 168.0
## 834    4.97e-39 145.0
## 835    2.84e-33 129.0
## 836    3.76e-10  62.4
## 837    1.66e-56 193.0
## 838    1.53e-54 188.0
## 839    2.00e-54 188.0
## 840    2.20e-54 187.0
## 841    1.10e-53 186.0
## 842    1.08e-52 183.0
## 843    1.24e-51 180.0
## 844    1.42e-50 177.0
## 845    2.56e-50 177.0
## 846    1.10e-47 170.0
## 847    2.04e-46 166.0
## 848    1.22e-42 156.0
## 849    2.98e-19  90.5
## 850    1.68e-56 190.0
## 851    3.36e-51 176.0
## 852    3.84e-50 173.0
## 853    7.10e-48 167.0
## 854    2.34e-45 161.0
## 855    3.27e-44 158.0
## 856    1.68e-56 190.0
## 857    3.36e-51 176.0
## 858    3.84e-50 173.0
## 859    7.10e-48 167.0
## 860    2.34e-45 161.0
## 861    3.27e-44 158.0
## 862    1.68e-56 190.0
## 863    3.36e-51 176.0
## 864    3.84e-50 173.0
## 865    7.10e-48 167.0
## 866    2.34e-45 161.0
## 867    3.27e-44 158.0
## 868    1.68e-56 190.0
## 869    3.36e-51 176.0
## 870    3.84e-50 173.0
## 871    7.10e-48 167.0
## 872    2.34e-45 161.0
## 873    3.27e-44 158.0
## 874    1.71e-56 200.0
## 875    3.42e-52 187.0
## 876    4.39e-52 187.0
## 877    1.85e-51 185.0
## 878    2.08e-51 185.0
## 879    3.49e-51 184.0
## 880    4.69e-51 184.0
## 881    4.07e-49 179.0
```

```
## 882    4.97e-49 178.0
## 883    8.33e-49 177.0
## 884    5.32e-48 175.0
## 885    4.24e-46 170.0
## 886    7.30e-46 169.0
## 887    2.36e-45 167.0
## 888    1.00e-44 166.0
## 889    8.86e-44 163.0
## 890    1.01e-43 163.0
## 891    3.69e-41 155.0
## 892    1.28e-29 122.0
## 893    1.67e-29 121.0
## 894    2.00e-56 189.0
## 895    7.24e-56 188.0
## 896    2.76e-55 186.0
## 897    2.02e-56 191.0
## 898    7.98e-55 187.0
## 899    8.78e-55 187.0
## 900    3.64e-54 185.0
## 901    7.46e-54 184.0
## 902    7.86e-54 184.0
## 903    1.07e-52 181.0
## 904    1.02e-47 168.0
## 905    1.97e-46 165.0
## 906    7.98e-38 142.0
## 907    2.70e-56 199.0
## 908    1.65e-55 197.0
## 909    4.72e-54 193.0
## 910    6.68e-54 192.0
## 911    3.39e-53 190.0
## 912    1.48e-52 189.0
## 913    2.66e-51 185.0
## 914    3.83e-51 184.0
## 915    5.67e-51 184.0
## 916    6.30e-51 184.0
## 917    6.93e-51 184.0
## 918    1.38e-50 183.0
## 919    4.58e-50 181.0
## 920    1.03e-49 180.0
## 921    2.40e-49 179.0
## 922    4.77e-49 178.0
## 923    4.69e-48 176.0
## 924    1.69e-45 168.0
## 925    1.08e-43 163.0
## 926    3.29e-43 161.0
## 927    1.58e-40 154.0
## 928    3.39e-38 147.0
## 929    1.05e-16  83.2
## 930    2.72e-56 189.0
## 931    1.33e-52 180.0
## 932    1.97e-51 177.0
## 933    3.74e-47 166.0
## 934    1.35e-41 151.0
## 935    6.78e-31 122.0
```

```
## 936    2.88e-56 197.0
## 937    2.07e-55 195.0
## 938    1.30e-53 190.0
## 939    3.85e-53 189.0
## 940    3.27e-52 186.0
## 941    4.80e-51 183.0
## 942    8.12e-51 182.0
## 943    2.12e-50 181.0
## 944    2.16e-50 181.0
## 945    4.19e-50 181.0
## 946    3.57e-49 178.0
## 947    1.00e-48 176.0
## 948    4.68e-47 172.0
## 949    8.05e-45 166.0
## 950    9.63e-42 157.0
## 951    1.93e-38 147.0
## 952    1.49e-37 145.0
## 953    1.21e-26 112.0
## 954    1.19e-16  82.8
## 955    3.63e-56 198.0
## 956    7.52e-55 194.0
## 957    1.12e-53 191.0
## 958    2.77e-52 187.0
## 959    1.12e-51 186.0
## 960    3.41e-51 184.0
## 961    5.87e-51 184.0
## 962    1.17e-50 182.0
## 963    1.94e-50 182.0
## 964    1.35e-49 180.0
## 965    1.94e-49 179.0
## 966    1.55e-48 177.0
## 967    2.56e-48 176.0
## 968    5.82e-48 175.0
## 969    2.29e-47 173.0
## 970    6.41e-47 172.0
## 971    3.76e-46 170.0
## 972    5.06e-46 169.0
## 973    6.43e-46 169.0
## 974    1.32e-45 168.0
## 975    4.54e-44 164.0
## 976    1.73e-43 162.0
## 977    2.58e-43 162.0
## 978    3.79e-56 197.0
## 979    1.01e-53 190.0
## 980    1.10e-53 190.0
## 981    1.50e-53 189.0
## 982    1.51e-53 189.0
## 983    2.17e-53 189.0
## 984    1.26e-52 187.0
## 985    1.37e-52 187.0
## 986    1.75e-52 187.0
## 987    6.61e-52 185.0
## 988    6.68e-52 185.0
## 989    3.30e-51 183.0
```

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## 990    3.95e-51 183.0
## 991    7.64e-49 176.0
## 992    4.46e-48 174.0
## 993    5.27e-48 174.0
## 994    5.07e-47 171.0
## 995    1.72e-43 161.0
## 996    6.04e-42 157.0
## 997    1.46e-33 133.0
## 998    3.98e-56 191.0
## 999    1.38e-54 187.0
## 1000   2.27e-53 184.0
## 1001   6.55e-53 182.0
## 1002   2.54e-52 181.0
## 1003   4.66e-52 180.0
## 1004   2.77e-50 176.0
## 1005   1.12e-47 169.0
## 1006   3.77e-43 156.0
## 1007   4.12e-56 184.0
## 1008   6.32e-53 176.0
## 1009   2.72e-43 151.0
## 1010   4.45e-56 190.0
## 1011   6.50e-54 184.0
## 1012   1.01e-52 181.0
## 1013   3.56e-52 180.0
## 1014   5.60e-52 179.0
## 1015   8.41e-50 174.0
## 1016   7.61e-42 152.0
## 1017   5.13e-56 187.0
## 1018   6.41e-53 179.0
## 1019   2.30e-48 167.0
## 1020   6.22e-56 196.0
## 1021   1.58e-52 186.0
## 1022   7.03e-52 184.0
## 1023   3.62e-51 182.0
## 1024   4.54e-50 179.0
## 1025   4.68e-50 179.0
## 1026   4.77e-50 179.0
## 1027   1.76e-48 175.0
## 1028   4.88e-48 174.0
## 1029   1.85e-47 172.0
## 1030   7.09e-47 171.0
## 1031   1.04e-46 170.0
## 1032   5.75e-42 157.0
## 1033   6.58e-56 195.0
## 1034   2.50e-54 191.0
## 1035   7.19e-53 187.0
## 1036   8.12e-53 187.0
## 1037   9.65e-53 186.0
## 1038   1.35e-51 183.0
## 1039   2.92e-51 182.0
## 1040   1.62e-50 181.0
## 1041   1.41e-49 178.0
## 1042   1.02e-48 176.0
## 1043   1.92e-46 169.0
```

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## 1044   2.98e-46 169.0
## 1045   1.19e-44 164.0
## 1046   6.03e-42 157.0
## 1047   2.83e-29 120.0
## 1048   6.76e-56 199.0
## 1049   1.28e-55 198.0
## 1050   1.61e-55 197.0
## 1051   2.86e-55 197.0
## 1052   1.26e-54 195.0
## 1053   6.84e-54 193.0
## 1054   1.81e-53 191.0
## 1055   2.17e-53 191.0
## 1056   2.21e-53 191.0
## 1057   2.41e-53 191.0
## 1058   2.84e-53 191.0
## 1059   3.25e-53 191.0
## 1060   3.40e-53 191.0
## 1061   6.39e-53 190.0
## 1062   8.76e-53 189.0
## 1063   1.47e-52 189.0
## 1064   1.85e-52 189.0
## 1065   2.23e-52 188.0
## 1066   4.66e-52 187.0
## 1067   7.16e-52 187.0
## 1068   8.75e-52 187.0
## 1069   9.09e-52 187.0
## 1070   1.08e-51 186.0
## 1071   1.37e-51 186.0
## 1072   1.44e-51 186.0
## 1073   2.13e-51 186.0
## 1074   2.55e-51 185.0
## 1075   2.97e-51 185.0
## 1076   3.43e-51 185.0
## 1077   3.63e-51 185.0
## 1078   3.95e-51 185.0
## 1079   4.03e-51 185.0
## 1080   6.02e-51 184.0
## 1081   6.07e-51 184.0
## 1082   8.09e-51 184.0
## 1083   9.33e-51 184.0
## 1084   1.06e-50 184.0
## 1085   1.18e-50 183.0
## 1086   1.59e-50 183.0
## 1087   2.59e-50 182.0
## 1088   2.96e-50 182.0
## 1089   3.45e-50 182.0
## 1090   3.55e-50 182.0
## 1091   4.72e-50 182.0
## 1092   6.05e-50 181.0
## 1093   6.23e-50 181.0
## 1094   7.83e-50 181.0
## 1095   1.05e-49 181.0
## 1096   1.19e-49 181.0
## 1097   1.36e-49 180.0
```

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## 1098   1.63e-49 180.0
## 1099   1.73e-49 180.0
## 1100   1.83e-49 180.0
## 1101   2.21e-49 180.0
## 1102   2.32e-49 179.0
## 1103   2.68e-49 179.0
## 1104   3.18e-49 179.0
## 1105   3.74e-49 179.0
## 1106   4.04e-49 179.0
## 1107   4.57e-49 179.0
## 1108   5.53e-49 179.0
## 1109   5.85e-49 178.0
## 1110   6.44e-49 178.0
## 1111   7.22e-49 178.0
## 1112   7.22e-49 178.0
## 1113   7.94e-49 178.0
## 1114   8.49e-49 178.0
## 1115   8.57e-49 178.0
## 1116   9.08e-49 178.0
## 1117   1.04e-48 178.0
## 1118   1.20e-48 177.0
## 1119   1.50e-48 177.0
## 1120   2.04e-48 177.0
## 1121   2.49e-48 177.0
## 1122   2.77e-48 176.0
## 1123   2.96e-48 176.0
## 1124   3.98e-48 176.0
## 1125   4.29e-48 176.0
## 1126   5.29e-48 176.0
## 1127   5.55e-48 176.0
## 1128   5.99e-48 176.0
## 1129   5.99e-48 176.0
## 1130   7.32e-48 175.0
## 1131   7.53e-48 175.0
## 1132   9.20e-48 175.0
## 1133   9.55e-48 175.0
## 1134   1.20e-47 175.0
## 1135   1.20e-47 175.0
## 1136   1.27e-47 174.0
## 1137   1.55e-47 174.0
## 1138   1.69e-47 174.0
## 1139   1.99e-47 174.0
## 1140   2.05e-47 174.0
## 1141   2.38e-47 174.0
## 1142   3.05e-47 173.0
## 1143   3.26e-47 173.0
## 1144   7.92e-47 172.0
## 1145   1.14e-46 172.0
## 1146   1.31e-46 172.0
## 1147   1.50e-46 171.0
## 1148   2.58e-46 171.0
## 1149   2.70e-46 171.0
## 1150   3.81e-46 170.0
## 1151   5.16e-46 170.0
```

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## 1152   6.74e-46 169.0
## 1153   7.56e-46 169.0
## 1154   9.86e-46 169.0
## 1155   1.83e-45 168.0
## 1156   2.84e-45 168.0
## 1157   6.93e-45 167.0
## 1158   6.93e-45 167.0
## 1159   1.48e-44 166.0
## 1160   1.54e-44 166.0
## 1161   2.15e-44 165.0
## 1162   2.63e-44 165.0
## 1163   2.70e-44 165.0
## 1164   4.96e-44 164.0
## 1165   1.88e-43 162.0
## 1166   1.99e-43 162.0
## 1167   3.69e-43 162.0
## 1168   1.35e-42 160.0
## 1169   1.75e-42 159.0
## 1170   9.58e-42 157.0
## 1171   1.18e-41 157.0
## 1172   4.76e-41 155.0
## 1173   4.18e-40 152.0
## 1174   8.11e-34 134.0
## 1175   5.79e-27 114.0
## 1176   2.88e-12  69.7
## 1177   6.89e-56 189.0
## 1178   3.67e-55 187.0
## 1179   8.66e-55 186.0
## 1180   1.62e-54 185.0
## 1181   7.58e-54 183.0
## 1182   1.64e-51 177.0
## 1183   9.27e-31 122.0
## 1184   6.97e-56 188.0
## 1185   8.85e-53 180.0
## 1186   9.95e-53 180.0
## 1187   1.24e-48 169.0
## 1188   3.81e-46 162.0
## 1189   7.51e-33 127.0
## 1190   1.36e-04  45.1
## 1191   7.10e-56 197.0
## 1192   1.70e-52 187.0
## 1193   1.88e-52 187.0
## 1194   9.75e-52 185.0
## 1195   3.90e-51 184.0
## 1196   4.48e-51 183.0
## 1197   6.77e-51 183.0
## 1198   1.33e-50 182.0
## 1199   1.01e-49 180.0
## 1200   1.69e-49 179.0
## 1201   1.87e-49 179.0
## 1202   3.56e-49 178.0
## 1203   2.21e-47 173.0
## 1204   2.28e-47 173.0
## 1205   2.72e-47 173.0
```

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## 1206   3.57e-46 169.0
## 1207   3.77e-45 167.0
## 1208   1.59e-44 165.0
## 1209   4.48e-44 164.0
## 1210   1.27e-41 156.0
## 1211   5.48e-39 149.0
## 1212   3.43e-34 135.0
## 1213   2.59e-33 132.0
## 1214   5.86e-19  90.1
## 1215   1.68e-11  67.0
## 1216   7.11e-56 198.0
## 1217   4.01e-55 196.0
## 1218   2.51e-54 194.0
## 1219   3.04e-53 191.0
## 1220   4.59e-51 184.0
## 1221   6.00e-51 184.0
## 1222   1.67e-50 182.0
## 1223   1.02e-49 180.0
## 1224   1.59e-49 180.0
## 1225   2.27e-49 179.0
## 1226   4.60e-49 178.0
## 1227   3.43e-48 176.0
## 1228   6.56e-48 175.0
## 1229   8.69e-46 169.0
## 1230   5.84e-45 166.0
## 1231   6.94e-45 166.0
## 1232   2.68e-44 164.0
## 1233   1.98e-41 156.0
## 1234   1.23e-40 154.0
## 1235   1.27e-38 148.0
## 1236   1.29e-38 148.0
## 1237   8.47e-27 113.0
## 1238   7.46e-56 186.0
## 1239   1.62e-51 175.0
## 1240   1.10e-50 173.0
## 1241   7.36e-46 160.0
## 1242   3.89e-34 129.0
## 1243   7.52e-56 191.0
## 1244   8.52e-55 189.0
## 1245   1.79e-54 188.0
## 1246   2.35e-54 187.0
## 1247   2.77e-54 187.0
## 1248   7.34e-53 184.0
## 1249   8.67e-52 181.0
## 1250   1.38e-50 177.0
## 1251   2.20e-50 177.0
## 1252   3.55e-48 171.0
## 1253   1.10e-47 170.0
## 1254   1.54e-45 164.0
## 1255   2.35e-45 164.0
## 1256   1.33e-17  85.5
## 1257   7.96e-56 188.0
## 1258   3.34e-54 184.0
## 1259   4.37e-52 178.0
```

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## 1260   2.25e-51 176.0
## 1261   1.66e-33 129.0
## 1262   8.38e-56 186.0
## 1263   2.75e-54 182.0
## 1264   2.01e-49 169.0
## 1265   5.94e-37 136.0
## 1266   8.38e-56 186.0
## 1267   2.75e-54 182.0
## 1268   2.01e-49 169.0
## 1269   5.94e-37 136.0
## 1270   8.38e-56 186.0
## 1271   2.75e-54 182.0
## 1272   2.01e-49 169.0
## 1273   5.94e-37 136.0
## 1274   8.38e-56 186.0
## 1275   2.75e-54 182.0
## 1276   2.01e-49 169.0
## 1277   5.94e-37 136.0
## 1278   8.38e-56 186.0
## 1279   2.75e-54 182.0
## 1280   2.01e-49 169.0
## 1281   5.94e-37 136.0
## 1282   8.38e-56 186.0
## 1283   2.75e-54 182.0
## 1284   2.01e-49 169.0
## 1285   5.94e-37 136.0
## 1286   8.38e-56 186.0
## 1287   2.75e-54 182.0
## 1288   2.01e-49 169.0
## 1289   5.94e-37 136.0
## 1290   8.38e-56 186.0
## 1291   2.75e-54 182.0
## 1292   2.01e-49 169.0
## 1293   5.94e-37 136.0
## 1294   9.68e-56 186.0
## 1295   3.95e-51 174.0
## 1296   1.69e-37 138.0
## 1297   7.62e-11  63.9
## 1298   1.14e-55 188.0
## 1299   3.82e-55 187.0
## 1300   1.18e-54 186.0
## 1301   2.26e-54 185.0
## 1302   3.00e-53 182.0
## 1303   4.10e-32 125.0
## 1304   3.21e-23 101.0
## 1305   2.09e-04  44.3
## 1306   1.21e-55 183.0
## 1307   9.72e-52 172.0
## 1308   1.33e-55 196.0
## 1309   1.99e-55 195.0
## 1310   1.91e-54 192.0
## 1311   9.19e-53 188.0
## 1312   1.17e-51 185.0
## 1313   4.99e-51 183.0
```

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## 1314   2.16e-49 178.0
## 1315   2.66e-49 178.0
## 1316   3.34e-49 178.0
## 1317   5.32e-48 174.0
## 1318   9.32e-48 174.0
## 1319   8.48e-45 166.0
## 1320   8.18e-40 151.0
## 1321   3.07e-33 132.0
## 1322   8.59e-33 130.0
## 1323   3.28e-32 129.0
## 1324   1.33e-55 186.0
## 1325   1.28e-54 183.0
## 1326   1.35e-55 185.0
## 1327   1.92e-55 185.0
## 1328   1.35e-55 185.0
## 1329   1.92e-55 185.0
## 1330   1.37e-55 185.0
## 1331   1.85e-53 179.0
## 1332   3.94e-52 176.0
## 1333   7.39e-52 175.0
## 1334   1.24e-50 172.0
## 1335   9.45e-42 149.0
## 1336   1.32e-34 130.0
## 1337   4.00e+00  30.8
## 1338   1.38e-55 186.0
## 1339   1.90e-42 151.0
## 1340   2.48e-38 140.0
## 1341   1.42e-55 197.0
## 1342   5.60e-55 195.0
## 1343   1.75e-54 194.0
## 1344   3.75e-54 192.0
## 1345   6.30e-54 192.0
## 1346   3.93e-52 187.0
## 1347   6.27e-52 186.0
## 1348   1.43e-51 185.0
## 1349   1.16e-50 182.0
## 1350   1.92e-50 182.0
## 1351   5.27e-50 181.0
## 1352   5.59e-50 181.0
## 1353   6.72e-50 181.0
## 1354   1.08e-49 180.0
## 1355   1.08e-49 180.0
## 1356   1.20e-49 180.0
## 1357   2.09e-49 179.0
## 1358   5.66e-49 178.0
## 1359   1.06e-46 171.0
## 1360   1.19e-45 168.0
## 1361   4.83e-44 164.0
## 1362   1.52e-55 189.0
## 1363   2.16e-53 183.0
## 1364   1.28e-51 178.0
## 1365   1.68e-51 178.0
## 1366   9.41e-51 176.0
## 1367   6.69e-50 174.0
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## 1368   5.06e-41 150.0
## 1369   8.40e-34 130.0
## 1370   3.55e-09  59.3
## 1371   1.58e-55 189.0
## 1372   8.63e-55 187.0
## 1373   1.71e-54 186.0
## 1374   2.03e-54 186.0
## 1375   1.19e-53 184.0
## 1376   5.56e-52 179.0
## 1377   2.93e-51 177.0
## 1378   9.37e-49 171.0
## 1379   2.36e-45 162.0
## 1380   1.59e-43 157.0
## 1381   2.81e-36 137.0
## 1382   1.68e-55 188.0
## 1383   7.36e-54 184.0
## 1384   1.28e-53 183.0
## 1385   1.09e-52 181.0
## 1386   3.65e-51 176.0
## 1387   5.80e-51 176.0
## 1388   3.06e-50 174.0
## 1389   1.56e-49 172.0
## 1390   1.70e-49 172.0
## 1391   3.63e-44 158.0
## 1392   1.03e-41 151.0
## 1393   4.69e-37 139.0
## 1394   1.70e-55 186.0
## 1395   1.53e-51 176.0
## 1396   2.62e-51 176.0
## 1397   8.43e-36 134.0
## 1398   1.78e-55 189.0
## 1399   7.32e-55 187.0
## 1400   1.86e-50 176.0
## 1401   2.45e-50 176.0
## 1402   1.54e-46 165.0
## 1403   2.26e-31 124.0
## 1404   1.85e-55 190.0
## 1405   5.07e-54 186.0
## 1406   2.00e-53 184.0
## 1407   3.81e-51 179.0
## 1408   6.56e-51 178.0
## 1409   7.99e-51 178.0
## 1410   5.49e-50 176.0
## 1411   1.90e-48 171.0
## 1412   1.16e-44 161.0
## 1413   1.75e-18  87.8
## 1414   1.87e-55 185.0
## 1415   2.22e-52 177.0
## 1416   9.64e-46 160.0
## 1417   1.90e-55 197.0
## 1418   1.21e-53 191.0
## 1419   2.14e-52 188.0
## 1420   3.29e-52 187.0
## 1421   1.42e-51 186.0
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## 1422   7.30e-51 184.0
## 1423   1.59e-50 182.0
## 1424   2.24e-50 182.0
## 1425   4.93e-50 181.0
## 1426   5.53e-50 181.0
## 1427   6.39e-50 181.0
## 1428   3.05e-49 179.0
## 1429   1.18e-48 177.0
## 1430   1.41e-48 177.0
## 1431   2.24e-48 176.0
## 1432   5.72e-48 175.0
## 1433   6.54e-48 175.0
## 1434   7.33e-48 175.0
## 1435   8.07e-48 175.0
## 1436   2.69e-47 173.0
## 1437   3.17e-47 173.0
## 1438   5.41e-47 172.0
## 1439   6.87e-47 172.0
## 1440   7.41e-47 172.0
## 1441   1.26e-45 168.0
## 1442   1.42e-45 168.0
## 1443   1.77e-44 165.0
## 1444   1.59e-42 159.0
## 1445   2.07e-41 156.0
## 1446   6.33e-18  87.0
## 1447   1.92e-55 190.0
## 1448   3.86e-55 189.0
## 1449   4.03e-55 189.0
## 1450   9.41e-55 188.0
## 1451   3.55e-54 187.0
## 1452   2.98e-52 182.0
## 1453   1.19e-51 180.0
## 1454   1.39e-51 180.0
## 1455   1.95e-49 174.0
## 1456   1.78e-32 128.0
## 1457   1.95e-55 191.0
## 1458   1.08e-54 189.0
## 1459   1.77e-54 188.0
## 1460   1.12e-53 186.0
## 1461   6.81e-53 184.0
## 1462   1.16e-52 183.0
## 1463   8.92e-52 181.0
## 1464   2.06e-50 177.0
## 1465   2.69e-50 177.0
## 1466   1.15e-47 170.0
## 1467   5.72e-46 165.0
## 1468   1.38e-42 156.0
## 1469   2.98e-19  90.5
## 1470   2.24e-55 190.0
## 1471   1.34e-54 187.0
## 1472   1.62e-54 187.0
## 1473   8.32e-54 186.0
## 1474   1.31e-53 185.0
## 1475   1.71e-53 185.0
```

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## 1476   1.84e-53 184.0
## 1477   1.02e-50 177.0
## 1478   1.08e-49 174.0
## 1479   9.32e-46 164.0
## 1480   2.62e-45 163.0
## 1481   2.90e-19  90.1
## 1482   2.27e-55 190.0
## 1483   3.20e-54 187.0
## 1484   1.46e-51 180.0
## 1485   3.48e-48 171.0
## 1486   1.36e-47 169.0
## 1487   2.36e-46 166.0
## 1488   5.87e-41 152.0
## 1489   7.05e-06  49.3
## 1490   2.45e-55 187.0
## 1491   3.45e-53 182.0
## 1492   5.55e-53 181.0
## 1493   7.30e-53 181.0
## 1494   6.76e-52 179.0
## 1495   7.05e-52 179.0
## 1496   1.19e-49 172.0
## 1497   5.97e-45 160.0
## 1498   2.62e-34 132.0
## 1499   6.80e-18  85.9
## 1500   2.52e-55 186.0
## 1501   3.42e-50 173.0
## 1502   4.27e-49 170.0
## 1503   2.90e-46 162.0
## 1504   1.99e-30 120.0
## 1505   2.53e-55 196.0
## 1506   4.60e-54 192.0
## 1507   1.81e-53 191.0
## 1508   1.37e-51 185.0
## 1509   1.87e-51 185.0
## 1510   2.67e-51 184.0
## 1511   3.51e-51 184.0
## 1512   3.95e-51 184.0
## 1513   8.33e-51 183.0
## 1514   8.83e-51 183.0
## 1515   1.38e-50 182.0
## 1516   2.31e-50 182.0
## 1517   5.26e-50 181.0
## 1518   1.26e-49 180.0
## 1519   1.98e-49 179.0
## 1520   2.43e-49 179.0
## 1521   1.41e-48 177.0
## 1522   2.33e-48 176.0
## 1523   2.72e-47 173.0
## 1524   3.92e-47 172.0
## 1525   4.26e-46 169.0
## 1526   8.10e-46 169.0
## 1527   9.44e-45 166.0
## 1528   9.55e-08  55.5
## 1529   2.61e-55 191.0
```

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## 1530   7.88e-54 187.0
## 1531   8.22e-54 187.0
## 1532   3.68e-53 186.0
## 1533   1.17e-52 184.0
## 1534   7.06e-52 182.0
## 1535   1.28e-51 181.0
## 1536   2.23e-49 176.0
## 1537   2.25e-49 176.0
## 1538   3.32e-49 175.0
## 1539   1.71e-48 173.0
## 1540   8.79e-47 168.0
## 1541   2.61e-55 191.0
## 1542   2.81e-55 191.0
## 1543   1.60e-54 189.0
## 1544   1.91e-54 189.0
## 1545   1.49e-53 186.0
## 1546   1.66e-53 186.0
## 1547   7.86e-53 184.0
## 1548   1.12e-52 184.0
## 1549   1.56e-52 183.0
## 1550   2.46e-52 183.0
## 1551   3.80e-52 182.0
## 1552   4.73e-52 182.0
## 1553   3.36e-47 169.0
## 1554   8.61e-42 154.0
## 1555   3.66e-35 136.0
## 1556   2.85e-16  81.3
## 1557   2.82e-55 184.0
## 1558   2.98e-54 182.0
## 1559   1.57e-45 159.0
## 1560   4.91e-41 147.0
## 1561   5.53e-15  75.9
## 1562   2.82e-55 185.0
## 1563   2.49e-50 172.0
## 1564   5.40e-50 171.0
## 1565   8.26e-36 134.0
## 1566   3.00e-55 187.0
## 1567   1.18e-53 183.0
## 1568   3.93e-53 182.0
## 1569   6.05e-53 181.0
## 1570   6.73e-53 181.0
## 1571   1.63e-52 180.0
## 1572   6.57e-52 179.0
## 1573   1.76e-49 172.0
## 1574   2.02e-44 159.0
## 1575   9.97e-36 135.0
## 1576   3.03e-55 186.0
## 1577   3.23e-55 186.0
## 1578   2.60e-54 183.0
## 1579   3.46e-54 183.0
## 1580   7.29e-54 182.0
## 1581   3.26e-49 170.0
## 1582   2.89e-04  43.9
## 1583   3.07e-55 185.0
```

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## 1584   6.54e-51 174.0
## 1585   1.28e-50 173.0
## 1586   7.15e-36 134.0
## 1587   3.91e-55 184.0
## 1588   4.00e-55 184.0
## 1589   3.33e-51 174.0
## 1590   7.23e-49 168.0
## 1591   4.22e-46 161.0
## 1592   2.03e-45 159.0
## 1593   3.53e-20  91.3
## 1594   2.00e-03  40.8
## 1595   4.05e-55 184.0
## 1596   7.68e-51 173.0
## 1597   4.46e-55 185.0
## 1598   2.49e-53 180.0
## 1599   2.64e-52 177.0
## 1600   3.66e-52 177.0
## 1601   2.25e-40 146.0
## 1602   2.59e-28 114.0
## 1603   1.15e-17  84.3
## 1604   4.51e-55 187.0
## 1605   3.79e-50 174.0
## 1606   2.32e-49 172.0
## 1607   4.54e-49 171.0
## 1608   2.73e-47 166.0
## 1609   4.51e-55 193.0
## 1610   3.29e-53 188.0
## 1611   1.11e-52 186.0
## 1612   3.19e-52 185.0
## 1613   1.38e-50 181.0
## 1614   1.91e-50 180.0
## 1615   2.24e-50 180.0
## 1616   2.53e-50 180.0
## 1617   5.28e-49 176.0
## 1618   8.55e-49 176.0
## 1619   1.12e-48 175.0
## 1620   1.28e-47 172.0
## 1621   1.70e-46 169.0
## 1622   4.98e-55 196.0
## 1623   2.64e-54 194.0
## 1624   5.52e-53 190.0
## 1625   1.76e-52 188.0
## 1626   1.30e-50 183.0
## 1627   1.11e-49 180.0
## 1628   1.13e-49 180.0
## 1629   1.29e-49 180.0
## 1630   1.38e-49 180.0
## 1631   1.87e-49 179.0
## 1632   2.39e-49 179.0
## 1633   7.38e-49 178.0
## 1634   1.48e-48 177.0
## 1635   3.82e-45 167.0
## 1636   1.01e-44 166.0
## 1637   1.45e-43 162.0
```

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## 1638   2.82e-39 150.0
## 1639   1.61e-33 133.0
## 1640   5.40e-55 187.0
## 1641   1.09e-53 184.0
## 1642   1.68e-53 183.0
## 1643   6.60e-53 182.0
## 1644   1.14e-52 181.0
## 1645   2.76e-52 180.0
## 1646   1.49e-50 176.0
## 1647   2.87e-49 172.0
## 1648   3.09e-49 172.0
## 1649   6.19e-44 158.0
## 1650   2.70e-36 137.0
## 1651   5.86e-55 192.0
## 1652   1.25e-54 191.0
## 1653   1.31e-54 191.0
## 1654   1.13e-53 189.0
## 1655   1.08e-52 186.0
## 1656   1.65e-52 186.0
## 1657   3.44e-52 185.0
## 1658   4.25e-52 184.0
## 1659   5.21e-52 184.0
## 1660   3.96e-51 182.0
## 1661   6.06e-51 181.0
## 1662   9.85e-51 181.0
## 1663   1.07e-50 181.0
## 1664   5.28e-50 179.0
## 1665   1.23e-49 178.0
## 1666   2.21e-49 177.0
## 1667   2.51e-48 174.0
## 1668   3.29e-42 157.0
## 1669   3.67e-38 146.0
## 1670   1.14e-36 142.0
## 1671   6.02e-55 187.0
## 1672   3.27e-48 170.0
## 1673   2.42e-46 165.0
## 1674   6.14e-44 158.0
## 1675   8.92e-44 158.0
## 1676   1.45e-43 157.0
## 1677   4.48e-31 123.0
## 1678   6.03e-55 185.0
## 1679   3.60e-54 183.0
## 1680   1.45e-51 176.0
## 1681   9.95e-47 163.0
## 1682   2.63e-36 135.0
## 1683   7.15e-32 124.0
## 1684   6.11e-55 196.0
## 1685   3.10e-54 194.0
## 1686   5.78e-54 193.0
## 1687   7.13e-54 192.0
## 1688   1.04e-53 192.0
## 1689   7.33e-53 189.0
## 1690   1.28e-52 189.0
## 1691   2.42e-52 188.0
```

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## 1692   1.41e-51 186.0
## 1693   6.21e-51 184.0
## 1694   8.42e-51 184.0
## 1695   8.59e-51 184.0
## 1696   8.75e-51 184.0
## 1697   1.95e-50 182.0
## 1698   9.32e-50 181.0
## 1699   2.14e-49 179.0
## 1700   2.51e-49 179.0
## 1701   3.51e-49 179.0
## 1702   2.86e-48 176.0
## 1703   4.26e-48 176.0
## 1704   6.01e-48 175.0
## 1705   1.73e-47 174.0
## 1706   2.98e-47 173.0
## 1707   1.96e-46 171.0
## 1708   2.54e-46 171.0
## 1709   2.59e-46 171.0
## 1710   2.76e-46 171.0
## 1711   5.92e-46 169.0
## 1712   8.99e-46 169.0
## 1713   1.50e-45 168.0
## 1714   2.42e-45 168.0
## 1715   3.16e-45 167.0
## 1716   1.62e-44 165.0
## 1717   3.27e-43 162.0
## 1718   3.70e-40 152.0
## 1719   1.31e-35 139.0
## 1720   5.07e-23 102.0
## 1721   4.58e-21  96.7
## 1722   6.38e-55 187.0
## 1723   2.02e-53 183.0
## 1724   3.14e-53 182.0
## 1725   2.51e-52 180.0
## 1726   2.85e-52 180.0
## 1727   3.17e-51 177.0
## 1728   2.23e-48 169.0
## 1729   1.22e-36 138.0
## 1730   9.42e-18  85.5
## 1731   6.38e-55 187.0
## 1732   2.02e-53 183.0
## 1733   3.14e-53 182.0
## 1734   2.51e-52 180.0
## 1735   2.85e-52 180.0
## 1736   3.17e-51 177.0
## 1737   2.23e-48 169.0
## 1738   1.22e-36 138.0
## 1739   9.42e-18  85.5
## 1740   6.38e-55 187.0
## 1741   2.02e-53 183.0
## 1742   3.14e-53 182.0
## 1743   2.51e-52 180.0
## 1744   2.85e-52 180.0
## 1745   3.17e-51 177.0
```

```
## 1746   2.23e-48 169.0
## 1747   1.22e-36 138.0
## 1748   9.42e-18  85.5
## 1749   6.45e-55 187.0
## 1750   2.15e-53 182.0
## 1751   3.24e-53 182.0
## 1752   2.53e-52 180.0
## 1753   3.00e-52 180.0
## 1754   3.24e-51 177.0
## 1755   2.30e-48 169.0
## 1756   1.31e-36 138.0
## 1757   9.88e-18  85.1
## 1758   6.45e-55 187.0
## 1759   2.15e-53 182.0
## 1760   3.24e-53 182.0
## 1761   2.53e-52 180.0
## 1762   3.00e-52 180.0
## 1763   3.24e-51 177.0
## 1764   2.30e-48 169.0
## 1765   1.31e-36 138.0
## 1766   9.88e-18  85.1
## 1767   6.45e-55 187.0
## 1768   2.15e-53 182.0
## 1769   3.24e-53 182.0
## 1770   2.53e-52 180.0
## 1771   3.00e-52 180.0
## 1772   3.24e-51 177.0
## 1773   2.30e-48 169.0
## 1774   1.31e-36 138.0
## 1775   9.88e-18  85.1
## 1776   6.45e-55 187.0
## 1777   2.15e-53 182.0
## 1778   3.24e-53 182.0
## 1779   2.53e-52 180.0
## 1780   3.00e-52 180.0
## 1781   3.24e-51 177.0
## 1782   2.30e-48 169.0
## 1783   1.31e-36 138.0
## 1784   9.88e-18  85.1
## 1785   6.45e-55 187.0
## 1786   2.15e-53 182.0
## 1787   3.24e-53 182.0
## 1788   2.53e-52 180.0
## 1789   3.00e-52 180.0
## 1790   3.24e-51 177.0
## 1791   2.30e-48 169.0
## 1792   1.31e-36 138.0
## 1793   9.88e-18  85.1
## 1794   6.45e-55 187.0
## 1795   2.15e-53 182.0
## 1796   3.24e-53 182.0
## 1797   2.53e-52 180.0
## 1798   3.00e-52 180.0
## 1799   3.24e-51 177.0
```

```
## 1800   2.30e-48 169.0
## 1801   1.31e-36 138.0
## 1802   9.88e-18  85.1
## 1803   6.45e-55 187.0
## 1804   2.15e-53 182.0
## 1805   3.24e-53 182.0
## 1806   2.53e-52 180.0
## 1807   3.00e-52 180.0
## 1808   3.24e-51 177.0
## 1809   2.30e-48 169.0
## 1810   1.31e-36 138.0
## 1811   9.88e-18  85.1
## 1812   6.45e-55 187.0
## 1813   2.15e-53 182.0
## 1814   3.24e-53 182.0
## 1815   2.53e-52 180.0
## 1816   3.00e-52 180.0
## 1817   3.24e-51 177.0
## 1818   2.30e-48 169.0
## 1819   1.31e-36 138.0
## 1820   9.88e-18  85.1
## 1821   6.45e-55 187.0
## 1822   2.15e-53 182.0
## 1823   3.24e-53 182.0
## 1824   2.53e-52 180.0
## 1825   3.00e-52 180.0
## 1826   3.24e-51 177.0
## 1827   2.30e-48 169.0
## 1828   1.31e-36 138.0
## 1829   9.88e-18  85.1
## 1830   6.45e-55 187.0
## 1831   2.15e-53 182.0
## 1832   3.24e-53 182.0
## 1833   2.53e-52 180.0
## 1834   3.00e-52 180.0
## 1835   3.24e-51 177.0
## 1836   2.30e-48 169.0
## 1837   1.31e-36 138.0
## 1838   9.88e-18  85.1
## 1839   6.45e-55 187.0
## 1840   2.15e-53 182.0
## 1841   3.24e-53 182.0
## 1842   2.53e-52 180.0
## 1843   3.00e-52 180.0
## 1844   3.24e-51 177.0
## 1845   2.30e-48 169.0
## 1846   1.31e-36 138.0
## 1847   9.88e-18  85.1
## 1848   6.79e-55 190.0
## 1849   2.02e-54 189.0
## 1850   2.96e-53 186.0
## 1851   7.00e-53 185.0
## 1852   8.09e-53 184.0
## 1853   5.21e-52 182.0
```

```
## 1854   1.18e-51 181.0
## 1855   2.38e-51 181.0
## 1856   3.49e-51 180.0
## 1857   1.04e-48 173.0
## 1858   1.05e-46 168.0
## 1859   3.46e-46 167.0
## 1860   6.85e-55 185.0
## 1861   1.31e-49 171.0
## 1862   2.10e-48 168.0
## 1863   5.65e-30 119.0
## 1864   6.95e-55 186.0
## 1865   2.80e-51 176.0
## 1866   1.38e-50 174.0
## 1867   3.38e-50 173.0
## 1868   6.67e-38 141.0
## 1869   6.97e-55 195.0
## 1870   4.24e-54 193.0
## 1871   1.39e-52 189.0
## 1872   5.33e-52 187.0
## 1873   1.42e-51 186.0
## 1874   1.97e-51 185.0
## 1875   2.09e-51 185.0
## 1876   1.07e-50 183.0
## 1877   1.39e-49 180.0
## 1878   6.76e-49 178.0
## 1879   1.43e-48 177.0
## 1880   1.64e-48 177.0
## 1881   3.29e-48 176.0
## 1882   3.41e-48 176.0
## 1883   4.21e-48 176.0
## 1884   8.44e-48 175.0
## 1885   1.31e-47 174.0
## 1886   1.74e-47 174.0
## 1887   2.13e-47 174.0
## 1888   9.95e-47 172.0
## 1889   1.59e-46 171.0
## 1890   1.60e-46 171.0
## 1891   5.79e-46 169.0
## 1892   1.30e-45 169.0
## 1893   1.65e-45 168.0
## 1894   1.71e-45 168.0
## 1895   2.09e-45 168.0
## 1896   2.15e-45 168.0
## 1897   2.58e-45 167.0
## 1898   4.65e-45 167.0
## 1899   6.48e-44 164.0
## 1900   1.21e-43 163.0
## 1901   1.51e-43 162.0
## 1902   1.15e-42 160.0
## 1903   2.73e-39 150.0
## 1904   1.03e-33 134.0
## 1905   4.80e-21  96.3
## 1906   3.09e-16  82.0
## 1907   7.21e-55 187.0
```

```
## 1908   7.44e-55 187.0
## 1909   3.29e-54 185.0
## 1910   3.49e-53 182.0
## 1911   4.51e-52 179.0
## 1912   9.51e-52 179.0
## 1913   1.09e-50 176.0
## 1914   8.50e-43 155.0
## 1915   1.11e-36 139.0
## 1916   3.66e-36 137.0
## 1917   9.10e-01  33.1
## 1918   8.06e-55 185.0
## 1919   2.48e-53 181.0
## 1920   2.47e-52 179.0
## 1921   1.61e-50 174.0
## 1922   7.61e-41 149.0
## 1923   8.08e-55 189.0
## 1924   2.20e-54 188.0
## 1925   3.41e-53 185.0
## 1926   8.25e-53 184.0
## 1927   9.25e-53 184.0
## 1928   6.23e-52 182.0
## 1929   1.41e-51 181.0
## 1930   2.42e-51 180.0
## 1931   4.19e-51 179.0
## 1932   1.25e-48 173.0
## 1933   1.21e-46 167.0
## 1934   3.94e-46 166.0
## 1935   8.38e-55 186.0
## 1936   1.15e-54 186.0
## 1937   1.63e-54 186.0
## 1938   4.74e-54 184.0
## 1939   1.68e-53 183.0
## 1940   2.96e-52 180.0
## 1941   7.73e-52 179.0
## 1942   5.25e-50 174.0
## 1943   5.88e-49 171.0
## 1944   8.97e-55 195.0
## 1945   1.38e-53 191.0
## 1946   1.17e-52 189.0
## 1947   1.54e-52 188.0
## 1948   4.52e-52 187.0
## 1949   1.42e-51 186.0
## 1950   1.93e-51 185.0
## 1951   2.00e-51 185.0
## 1952   2.67e-51 185.0
## 1953   8.19e-51 183.0
## 1954   8.59e-51 183.0
## 1955   2.16e-50 182.0
## 1956   2.77e-50 182.0
## 1957   1.80e-49 179.0
## 1958   7.22e-49 178.0
## 1959   8.33e-49 177.0
## 1960   1.55e-48 177.0
## 1961   8.18e-48 175.0
```

```
## 1962   9.43e-48 174.0
## 1963   7.17e-46 169.0
## 1964   1.34e-45 168.0
## 1965   2.86e-44 164.0
## 1966   2.22e-38 147.0
## 1967   6.45e-34 134.0
## 1968   3.00e-19  90.9
## 1969   9.15e-55 195.0
## 1970   1.02e-54 195.0
## 1971   3.26e-54 193.0
## 1972   5.26e-54 193.0
## 1973   1.06e-53 192.0
## 1974   1.13e-53 192.0
## 1975   6.06e-53 190.0
## 1976   8.23e-53 189.0
## 1977   8.97e-53 189.0
## 1978   8.30e-52 186.0
## 1979   1.76e-51 186.0
## 1980   1.03e-50 183.0
## 1981   1.28e-50 183.0
## 1982   1.33e-50 183.0
## 1983   1.57e-50 183.0
## 1984   1.74e-50 182.0
## 1985   2.58e-50 182.0
## 1986   4.31e-50 181.0
## 1987   6.62e-50 181.0
## 1988   8.01e-50 181.0
## 1989   9.89e-50 181.0
## 1990   1.45e-49 180.0
## 1991   5.05e-49 178.0
## 1992   5.61e-49 178.0
## 1993   1.07e-48 177.0
## 1994   2.63e-48 176.0
## 1995   3.53e-48 176.0
## 1996   4.75e-47 172.0
## 1997   6.90e-46 169.0
## 1998   7.66e-46 169.0
## 1999   2.53e-43 162.0
## 2000   1.90e-31 127.0
## 2001   9.15e-55 195.0
## 2002   1.02e-54 195.0
## 2003   3.26e-54 193.0
## 2004   5.26e-54 193.0
## 2005   1.06e-53 192.0
## 2006   1.13e-53 192.0
## 2007   6.06e-53 190.0
## 2008   8.23e-53 189.0
## 2009   8.97e-53 189.0
## 2010   8.30e-52 186.0
## 2011   1.76e-51 186.0
## 2012   1.03e-50 183.0
## 2013   1.28e-50 183.0
## 2014   1.33e-50 183.0
## 2015   1.57e-50 183.0
```

```
## 2016   1.74e-50 182.0
## 2017   2.58e-50 182.0
## 2018   4.31e-50 181.0
## 2019   6.62e-50 181.0
## 2020   8.01e-50 181.0
## 2021   9.89e-50 181.0
## 2022   1.45e-49 180.0
## 2023   5.05e-49 178.0
## 2024   5.61e-49 178.0
## 2025   1.07e-48 177.0
## 2026   2.63e-48 176.0
## 2027   3.53e-48 176.0
## 2028   4.75e-47 172.0
## 2029   6.90e-46 169.0
## 2030   7.66e-46 169.0
## 2031   2.53e-43 162.0
## 2032   1.90e-31 127.0
## 2033   9.50e-55 184.0
## 2034   2.82e-54 182.0
## 2035   6.19e-54 181.0
## 2036   7.07e-50 171.0
## 2037   6.27e-41 147.0
## 2038   1.15e-15  78.2
## 2039   1.11e-54 186.0
## 2040   9.27e-54 183.0
## 2041   2.50e-53 182.0
## 2042   3.74e-53 182.0
## 2043   1.66e-51 177.0
## 2044   3.19e-51 176.0
## 2045   1.06e-37 140.0
## 2046   2.20e-01  35.0
## 2047   1.17e-54 181.0
## 2048   5.88e-51 171.0
## 2049   4.83e-14  72.4
## 2050   1.18e-54 183.0
## 2051   8.43e-33 125.0
## 2052   1.24e-54 181.0
## 2053   2.10e-54 181.0
## 2054   6.58e-53 177.0
## 2055   8.59e-41 145.0
## 2056   1.31e-54 189.0
## 2057   2.78e-54 189.0
## 2058   3.50e-54 188.0
## 2059   2.87e-51 181.0
## 2060   7.72e-51 179.0
## 2061   9.93e-49 174.0
## 2062   2.21e-48 173.0
## 2063   2.88e-48 172.0
## 2064   3.19e-48 172.0
## 2065   1.88e-46 167.0
## 2066   5.10e-46 166.0
## 2067   6.12e-46 166.0
## 2068   2.86e-35 137.0
## 2069   1.31e-54 185.0
```

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## 2070   9.47e-54 183.0
## 2071   2.20e-50 174.0
## 2072   1.85e-48 169.0
## 2073   1.39e-54 180.0
## 2074   7.25e-50 167.0
## 2075   2.70e-44 153.0
## 2076   1.61e-34 127.0
## 2077   1.76e-27 108.0
## 2078   1.49e-22  95.9
## 2079   1.42e-54 186.0
## 2080   2.04e-53 183.0
## 2081   2.35e-52 180.0
## 2082   3.77e-52 180.0
## 2083   4.32e-52 179.0
## 2084   1.41e-49 173.0
## 2085   1.54e-54 188.0
## 2086   1.96e-54 188.0
## 2087   2.44e-54 187.0
## 2088   1.23e-53 186.0
## 2089   2.48e-53 185.0
## 2090   1.36e-52 183.0
## 2091   5.56e-51 179.0
## 2092   9.84e-51 178.0
## 2093   8.85e-49 173.0
## 2094   9.04e-49 173.0
## 2095   4.95e-46 165.0
## 2096   1.26e-45 164.0
## 2097   3.31e-33 130.0
## 2098   2.66e-19  90.5
## 2099   1.65e-54 193.0
## 2100   1.67e-54 193.0
## 2101   1.92e-54 193.0
## 2102   3.71e-53 190.0
## 2103   4.13e-53 189.0
## 2104   4.88e-53 189.0
## 2105   8.62e-53 189.0
## 2106   2.41e-52 187.0
## 2107   2.84e-52 187.0
## 2108   8.66e-52 186.0
## 2109   1.56e-51 185.0
## 2110   1.57e-51 185.0
## 2111   1.65e-51 185.0
## 2112   5.02e-51 184.0
## 2113   5.81e-51 183.0
## 2114   1.05e-50 183.0
## 2115   1.16e-49 180.0
## 2116   1.57e-49 179.0
## 2117   7.50e-49 177.0
## 2118   6.70e-48 175.0
## 2119   1.29e-46 171.0
## 2120   9.98e-44 163.0
## 2121   3.93e-31 126.0
## 2122   5.56e-28 117.0
## 2123   1.68e-54 184.0
```

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## 2124   1.07e-50 174.0
## 2125   6.48e-33 127.0
## 2126   1.68e-54 184.0
## 2127   1.07e-50 174.0
## 2128   6.48e-33 127.0
## 2129   1.68e-54 184.0
## 2130   1.07e-50 174.0
## 2131   6.48e-33 127.0
## 2132   1.68e-54 184.0
## 2133   1.07e-50 174.0
## 2134   6.48e-33 127.0
## 2135   1.72e-54 186.0
## 2136   4.64e-52 179.0
## 2137   2.42e-49 172.0
## 2138   1.03e-48 171.0
## 2139   5.10e-47 166.0
## 2140   3.38e-46 164.0
## 2141   1.68e-44 159.0
## 2142   4.93e-29 117.0
## 2143   1.90e-54 184.0
## 2144   1.68e-53 181.0
## 2145   1.80e-49 171.0
## 2146   3.22e-48 167.0
## 2147   1.97e-54 194.0
## 2148   4.12e-54 193.0
## 2149   9.83e-54 192.0
## 2150   1.51e-53 191.0
## 2151   7.74e-53 189.0
## 2152   1.03e-52 189.0
## 2153   1.92e-52 188.0
## 2154   7.88e-52 186.0
## 2155   9.72e-52 186.0
## 2156   1.04e-51 186.0
## 2157   2.78e-51 185.0
## 2158   2.38e-50 182.0
## 2159   7.91e-50 181.0
## 2160   9.12e-50 181.0
## 2161   9.30e-50 181.0
## 2162   1.56e-49 180.0
## 2163   2.65e-49 179.0
## 2164   2.73e-49 179.0
## 2165   3.21e-49 179.0
## 2166   1.17e-48 177.0
## 2167   1.32e-48 177.0
## 2168   2.04e-48 177.0
## 2169   2.52e-48 176.0
## 2170   3.29e-48 176.0
## 2171   1.10e-47 174.0
## 2172   4.43e-47 173.0
## 2173   2.39e-46 171.0
## 2174   1.10e-45 169.0
## 2175   1.27e-42 160.0
## 2176   2.76e-42 159.0
## 2177   2.15e-40 153.0
```

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## 2178   1.92e-34 136.0
## 2179   2.21e-54 182.0
## 2180   7.44e-53 179.0
## 2181   2.10e-50 172.0
## 2182   2.30e-54 183.0
## 2183   5.51e-54 182.0
## 2184   6.83e-52 177.0
## 2185   3.04e-46 162.0
## 2186   2.60e-41 149.0
## 2187   2.50e-54 189.0
## 2188   3.82e-54 188.0
## 2189   1.54e-53 187.0
## 2190   7.64e-53 185.0
## 2191   8.74e-53 185.0
## 2192   4.61e-50 177.0
## 2193   2.28e-47 170.0
## 2194   1.90e-46 168.0
## 2195   1.69e-45 165.0
## 2196   2.55e-54 186.0
## 2197   1.89e-53 183.0
## 2198   2.59e-51 177.0
## 2199   3.37e-51 177.0
## 2200   6.87e-51 177.0
## 2201   1.48e-49 173.0
## 2202   7.76e-49 171.0
## 2203   2.55e-54 189.0
## 2204   1.10e-53 187.0
## 2205   2.09e-52 184.0
## 2206   1.19e-51 182.0
## 2207   7.12e-51 180.0
## 2208   9.79e-51 179.0
## 2209   7.10e-49 174.0
## 2210   1.69e-48 173.0
## 2211   2.55e-48 173.0
## 2212   4.60e-48 172.0
## 2213   3.47e-47 170.0
## 2214   8.03e-46 166.0
## 2215   1.22e-45 166.0
## 2216   1.28e-29 121.0
## 2217   2.67e-54 183.0
## 2218   1.87e-53 181.0
## 2219   2.04e-49 170.0
## 2220   3.82e-48 167.0
## 2221   2.70e-54 183.0
## 2222   2.01e-53 181.0
## 2223   1.32e-50 174.0
## 2224   4.11e-48 167.0
## 2225   2.99e-54 184.0
## 2226   1.59e-53 182.0
## 2227   1.96e-52 180.0
## 2228   2.50e-52 179.0
## 2229   7.96e-50 173.0
## 2230   3.49e-26 109.0
## 2231   3.07e-54 182.0
```

```
## 2232   1.89e-53 180.0
## 2233   2.39e-51 175.0
## 2234   4.25e-50 171.0
## 2235   4.98e-50 171.0
## 2236   2.37e-06  50.1
## 2237   3.11e-54 181.0
## 2238   3.23e-49 168.0
## 2239   9.53e-47 162.0
## 2240   3.68e-36 134.0
## 2241   3.16e-11  64.7
## 2242   3.13e-54 193.0
## 2243   4.79e-54 192.0
## 2244   5.38e-54 192.0
## 2245   1.05e-52 189.0
## 2246   3.66e-52 187.0
## 2247   7.92e-52 186.0
## 2248   2.04e-51 185.0
## 2249   6.27e-51 184.0
## 2250   1.88e-50 182.0
## 2251   3.79e-50 181.0
## 2252   7.63e-50 181.0
## 2253   1.12e-49 180.0
## 2254   1.69e-49 179.0
## 2255   8.61e-48 175.0
## 2256   2.00e-47 174.0
## 2257   2.93e-47 173.0
## 2258   1.40e-45 168.0
## 2259   1.42e-45 168.0
## 2260   2.39e-43 162.0
## 2261   4.14e-42 158.0
## 2262   2.35e-38 147.0
## 2263   2.61e-36 141.0
## 2264   3.30e-54 181.0
## 2265   1.41e-53 179.0
## 2266   7.89e-40 143.0
## 2267   3.42e-54 189.0
## 2268   2.45e-51 182.0
## 2269   5.50e-50 178.0
## 2270   8.52e-50 177.0
## 2271   2.50e-49 176.0
## 2272   6.00e-49 175.0
## 2273   7.27e-49 175.0
## 2274   8.38e-48 172.0
## 2275   6.81e-47 170.0
## 2276   2.38e-46 168.0
## 2277   4.42e-45 165.0
## 2278   1.93e-28 117.0
## 2279   3.50e-54 184.0
## 2280   1.14e-52 180.0
## 2281   2.47e-28 115.0
## 2282   4.19e-54 181.0
## 2283   2.26e-53 179.0
## 2284   3.07e-51 174.0
## 2285   6.89e-51 173.0
```

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## 2286   6.37e-43 152.0
## 2287   1.96e-06  50.4
## 2288   4.29e-54 181.0
## 2289   1.98e-44 155.0
## 2290   4.42e-54 186.0
## 2291   1.30e-52 182.0
## 2292   2.09e-52 181.0
## 2293   5.09e-52 181.0
## 2294   5.71e-52 180.0
## 2295   1.08e-51 179.0
## 2296   1.45e-51 179.0
## 2297   2.21e-50 176.0
## 2298   3.00e-49 173.0
## 2299   3.03e-49 173.0
## 2300   5.01e-47 167.0
## 2301   2.51e-39 146.0
## 2302   9.49e-37 139.0
## 2303   4.57e-54 193.0
## 2304   1.13e-53 192.0
## 2305   1.28e-53 192.0
## 2306   7.15e-53 190.0
## 2307   1.41e-52 189.0
## 2308   2.72e-52 188.0
## 2309   7.71e-52 187.0
## 2310   1.75e-51 186.0
## 2311   2.93e-51 185.0
## 2312   1.05e-50 183.0
## 2313   6.27e-50 181.0
## 2314   7.30e-50 181.0
## 2315   1.20e-49 180.0
## 2316   2.83e-49 179.0
## 2317   4.51e-49 179.0
## 2318   1.42e-48 177.0
## 2319   1.65e-48 177.0
## 2320   1.73e-48 177.0
## 2321   2.42e-48 176.0
## 2322   3.89e-48 176.0
## 2323   1.26e-47 174.0
## 2324   1.48e-47 174.0
## 2325   3.90e-47 173.0
## 2326   6.05e-47 172.0
## 2327   7.60e-47 172.0
## 2328   7.74e-47 172.0
## 2329   8.68e-47 172.0
## 2330   1.55e-46 171.0
## 2331   3.08e-46 170.0
## 2332   1.39e-45 169.0
## 2333   8.36e-45 166.0
## 2334   2.47e-44 165.0
## 2335   2.54e-44 165.0
## 2336   7.10e-44 164.0
## 2337   1.39e-43 162.0
## 2338   2.07e-42 159.0
## 2339   4.60e-54 192.0
```

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## 2340   5.65e-54 192.0
## 2341   4.64e-53 189.0
## 2342   5.52e-53 189.0
## 2343   1.63e-50 182.0
## 2344   9.22e-50 180.0
## 2345   9.68e-50 180.0
## 2346   1.49e-49 179.0
## 2347   2.18e-49 179.0
## 2348   2.24e-49 179.0
## 2349   2.57e-49 179.0
## 2350   3.11e-49 179.0
## 2351   3.60e-49 179.0
## 2352   1.16e-48 177.0
## 2353   4.33e-48 175.0
## 2354   4.86e-48 175.0
## 2355   7.39e-47 172.0
## 2356   1.88e-46 171.0
## 2357   6.92e-46 169.0
## 2358   9.40e-46 169.0
## 2359   6.60e-41 154.0
## 2360   3.78e-05  47.4
## 2361   5.23e-54 188.0
## 2362   1.08e-52 184.0
## 2363   6.04e-51 179.0
## 2364   2.17e-50 178.0
## 2365   1.18e-45 165.0
## 2366   2.69e-44 162.0
## 2367   6.89e-38 144.0
## 2368   5.23e-54 188.0
## 2369   1.08e-52 184.0
## 2370   6.04e-51 179.0
## 2371   2.17e-50 178.0
## 2372   1.18e-45 165.0
## 2373   2.69e-44 162.0
## 2374   6.89e-38 144.0
## 2375   5.25e-54 184.0
## 2376   1.34e-53 183.0
## 2377   6.04e-50 174.0
## 2378   1.04e-46 165.0
## 2379   3.25e-45 161.0
## 2380   9.32e-31 122.0
## 2381   5.70e-54 179.0
## 2382   8.44e-53 176.0
## 2383   1.49e-45 157.0
## 2384   7.33e-43 150.0
## 2385   5.76e-54 192.0
## 2386   2.57e-52 188.0
## 2387   2.31e-51 185.0
## 2388   1.10e-50 183.0
## 2389   2.88e-50 182.0
## 2390   3.39e-50 182.0
## 2391   3.88e-50 181.0
## 2392   1.01e-49 180.0
## 2393   1.05e-49 180.0
```

```
## 2394   4.22e-49 178.0
## 2395   4.39e-49 178.0
## 2396   4.83e-49 178.0
## 2397   9.90e-49 177.0
## 2398   1.08e-48 177.0
## 2399   1.49e-48 177.0
## 2400   6.58e-48 175.0
## 2401   1.66e-47 174.0
## 2402   8.13e-47 172.0
## 2403   2.28e-46 171.0
## 2404   3.34e-46 170.0
## 2405   7.23e-46 169.0
## 2406   1.61e-45 168.0
## 2407   1.15e-43 163.0
## 2408   1.71e-43 162.0
## 2409   2.51e-34 135.0
## 2410   1.68e-23 103.0
## 2411   2.00e-03  41.6
## 2412   6.64e-54 183.0
## 2413   5.25e-50 173.0
## 2414   1.74e-49 172.0
## 2415   2.25e-46 164.0
## 2416   1.70e-37 140.0
## 2417   9.07e-32 124.0
## 2418   6.64e-54 183.0
## 2419   1.04e-50 175.0
## 2420   1.13e-49 172.0
## 2421   4.92e-47 165.0
## 2422   6.03e-46 162.0
## 2423   2.41e-40 147.0
## 2424   4.06e-29 117.0
## 2425   6.96e-54 185.0
## 2426   6.34e-50 174.0
## 2427   6.03e-48 169.0
## 2428   3.86e-45 162.0
## 2429   1.26e-44 160.0
## 2430   1.37e-44 160.0
## 2431   1.37e-29 119.0
## 2432   7.11e-54 184.0
## 2433   1.57e-51 178.0
## 2434   5.35e-51 177.0
## 2435   5.74e-29 117.0
## 2436   7.65e-54 182.0
## 2437   1.05e-53 181.0
## 2438   5.84e-53 179.0
## 2439   1.16e-52 179.0
## 2440   4.26e-51 174.0
## 2441   7.88e-54 191.0
## 2442   1.78e-52 187.0
## 2443   3.58e-52 186.0
## 2444   6.28e-52 186.0
## 2445   3.96e-51 184.0
## 2446   9.88e-51 182.0
## 2447   1.15e-50 182.0
```

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## 2448   3.80e-50 181.0
## 2449   4.66e-49 178.0
## 2450   1.35e-48 176.0
## 2451   2.48e-48 176.0
## 2452   1.94e-47 173.0
## 2453   3.36e-46 170.0
## 2454   2.89e-44 164.0
## 2455   1.81e-43 162.0
## 2456   4.48e-25 108.0
## 2457   8.14e-54 180.0
## 2458   8.88e-53 177.0
## 2459   1.40e-52 177.0
## 2460   1.59e-48 166.0
## 2461   8.23e-48 165.0
## 2462   8.23e-54 179.0
## 2463   1.62e-52 176.0
## 2464   3.26e-49 167.0
## 2465   2.40e-02  37.7
## 2466   8.65e-54 181.0
## 2467   3.42e-53 179.0
## 2468   5.16e-48 166.0
## 2469   3.09e-47 164.0
## 2470   4.71e-30 118.0
## 2471   8.97e-54 187.0
## 2472   7.93e-52 182.0
## 2473   1.67e-50 179.0
## 2474   1.35e-49 176.0
## 2475   3.27e-49 175.0
## 2476   2.77e-47 170.0
## 2477   1.25e-46 168.0
## 2478   2.21e-45 165.0
## 2479   6.47e-45 164.0
## 2480   4.87e-32 128.0
## 2481   2.26e-19  90.9
## 2482   2.58e-07  53.9
## 2483   9.31e-54 182.0
## 2484   1.23e-46 163.0
## 2485   4.09e-31 122.0
## 2486   1.19e-53 187.0
## 2487   1.20e-53 187.0
## 2488   3.00e-53 186.0
## 2489   4.88e-52 183.0
## 2490   1.28e-51 182.0
## 2491   1.49e-46 168.0
## 2492   1.51e-37 143.0
## 2493   9.58e-37 141.0
## 2494   2.92e-36 140.0
## 2495   8.09e-32 127.0
## 2496   9.09e-32 127.0
## 2497   6.70e-01  33.5
## 2498   1.24e-53 181.0
## 2499   1.14e-51 176.0
## 2500   3.06e-50 172.0
## 2501   1.26e-53 179.0
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```
## 2502   2.09e-52 176.0
## 2503   3.96e-30 117.0
## 2504   1.26e-53 182.0
## 2505   4.93e-53 181.0
## 2506   1.65e-40 148.0
## 2507   1.14e-28 116.0
## 2508   1.30e-53 191.0
## 2509   2.02e-53 191.0
## 2510   2.09e-51 185.0
## 2511   4.76e-51 184.0
## 2512   1.23e-50 182.0
## 2513   1.45e-50 182.0
## 2514   1.66e-50 182.0
## 2515   2.31e-50 182.0
## 2516   1.37e-49 180.0
## 2517   1.38e-49 180.0
## 2518   1.72e-49 179.0
## 2519   4.48e-49 178.0
## 2520   1.19e-48 177.0
## 2521   1.44e-48 177.0
## 2522   2.59e-48 176.0
## 2523   7.70e-48 175.0
## 2524   9.25e-48 174.0
## 2525   1.36e-47 174.0
## 2526   1.90e-47 174.0
## 2527   2.97e-46 170.0
## 2528   1.84e-45 168.0
## 2529   1.41e-44 165.0
## 2530   2.11e-44 165.0
## 2531   1.51e-53 182.0
## 2532   2.48e-52 178.0
## 2533   5.94e-51 175.0
## 2534   1.79e-35 134.0
## 2535   1.64e-53 184.0
## 2536   7.82e-51 177.0
## 2537   2.50e-49 172.0
## 2538   1.27e-45 163.0
## 2539   3.40e-44 159.0
## 2540   6.72e-29 117.0
## 2541   1.70e-53 184.0
## 2542   2.11e-51 178.0
## 2543   9.54e-50 174.0
## 2544   4.93e-46 164.0
## 2545   1.06e-29 120.0
## 2546   1.73e-53 190.0
## 2547   2.40e-53 189.0
## 2548   2.72e-52 186.0
## 2549   1.56e-50 181.0
## 2550   1.96e-50 181.0
## 2551   3.64e-49 177.0
## 2552   5.73e-49 177.0
## 2553   9.77e-49 176.0
## 2554   2.26e-48 176.0
## 2555   6.89e-48 174.0
```

```
## 2556   2.79e-47 172.0
## 2557   3.43e-47 172.0
## 2558   1.88e-46 170.0
## 2559   2.26e-46 170.0
## 2560   1.55e-43 162.0
## 2561   3.90e-43 160.0
## 2562   7.61e-38 145.0
## 2563   1.32e-32 130.0
## 2564   1.73e-53 180.0
## 2565   1.52e-52 178.0
## 2566   8.24e-48 165.0
## 2567   3.71e-45 158.0
## 2568   1.58e-32 125.0
## 2569   1.86e-53 180.0
## 2570   1.58e-52 177.0
## 2571   8.50e-48 165.0
## 2572   3.75e-45 158.0
## 2573   1.58e-32 125.0
## 2574   2.17e-53 191.0
## 2575   1.68e-52 189.0
## 2576   2.11e-52 188.0
## 2577   3.60e-52 187.0
## 2578   1.81e-51 186.0
## 2579   2.62e-51 185.0
## 2580   8.56e-51 184.0
## 2581   1.82e-50 182.0
## 2582   2.22e-50 182.0
## 2583   8.14e-50 181.0
## 2584   1.08e-49 180.0
## 2585   1.10e-49 180.0
## 2586   2.53e-49 179.0
## 2587   4.32e-49 179.0
## 2588   2.90e-48 176.0
## 2589   8.77e-48 175.0
## 2590   8.30e-47 172.0
## 2591   1.36e-46 171.0
## 2592   2.32e-43 162.0
## 2593   2.99e-43 162.0
## 2594   2.40e-42 159.0
## 2595   2.97e-25 108.0
## 2596   2.19e-53 184.0
## 2597   1.85e-51 179.0
## 2598   7.34e-51 177.0
## 2599   2.46e-49 174.0
## 2600   1.09e-45 164.0
## 2601   3.09e-44 160.0
## 2602   6.56e-42 154.0
## 2603   1.49e-36 139.0
## 2604   3.49e-10  62.8
## 2605   2.27e-53 187.0
## 2606   9.59e-53 185.0
## 2607   2.16e-52 184.0
## 2608   2.71e-52 184.0
## 2609   4.30e-52 183.0
```

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## 2610   1.67e-51 182.0
## 2611   2.22e-51 181.0
## 2612   3.57e-51 181.0
## 2613   7.16e-51 180.0
## 2614   7.24e-50 177.0
## 2615   1.57e-49 176.0
## 2616   2.05e-49 176.0
## 2617   3.56e-49 176.0
## 2618   6.86e-48 172.0
## 2619   1.72e-46 168.0
## 2620   5.57e-32 127.0
## 2621   2.44e-53 187.0
## 2622   4.64e-49 176.0
## 2623   1.93e-48 174.0
## 2624   6.33e-48 172.0
## 2625   1.53e-47 171.0
## 2626   1.56e-47 171.0
## 2627   1.41e-45 166.0
## 2628   2.37e-45 165.0
## 2629   3.15e-45 165.0
## 2630   8.79e-38 144.0
## 2631   3.70e-16  81.3
## 2632   2.45e-53 177.0
## 2633   4.86e-47 160.0
## 2634   2.48e-53 180.0
## 2635   1.11e-52 178.0
## 2636   9.35e-52 176.0
## 2637   2.04e-50 172.0
## 2638   2.52e-48 167.0
## 2639   6.29e-43 152.0
## 2640   7.37e-36 134.0
## 2641   2.49e-53 184.0
## 2642   4.26e-53 183.0
## 2643   2.22e-51 178.0
## 2644   2.77e-51 178.0
## 2645   4.47e-48 169.0
## 2646   4.52e-47 167.0
## 2647   6.31e-44 159.0
## 2648   8.97e-43 155.0
## 2649   9.80e-32 125.0
## 2650   2.55e-53 181.0
## 2651   1.24e-51 176.0
## 2652   1.35e-51 176.0
## 2653   3.88e-50 172.0
## 2654   3.83e-37 138.0
## 2655   2.66e-53 190.0
## 2656   3.56e-50 181.0
## 2657   9.86e-50 180.0
## 2658   3.77e-48 176.0
## 2659   8.16e-48 174.0
## 2660   2.68e-47 173.0
## 2661   2.70e-47 173.0
## 2662   7.23e-46 169.0
## 2663   7.96e-46 169.0
```

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## 2664   1.53e-43 162.0
## 2665   2.04e-43 162.0
## 2666   4.14e-43 161.0
## 2667   4.41e-40 152.0
## 2668   3.35e-36 141.0
## 2669   5.35e-07  53.1
## 2670   2.80e-53 182.0
## 2671   1.62e-48 169.0
## 2672   2.52e-47 166.0
## 2673   6.62e-46 162.0
## 2674   3.56e-39 144.0
## 2675   5.60e-29 117.0
## 2676   2.81e-53 184.0
## 2677   4.64e-53 184.0
## 2678   1.68e-52 182.0
## 2679   1.90e-52 182.0
## 2680   2.11e-52 182.0
## 2681   8.66e-52 180.0
## 2682   4.97e-41 151.0
## 2683   2.41e-36 139.0
## 2684   5.80e+00  30.4
## 2685   2.84e-53 182.0
## 2686   2.28e-52 179.0
## 2687   5.47e-52 178.0
## 2688   3.38e-50 174.0
## 2689   5.92e-49 171.0
## 2690   5.92e-49 171.0
## 2691   1.06e-33 130.0
## 2692   4.40e-33 128.0
## 2693   9.63e-24 102.0
## 2694   2.84e-53 182.0
## 2695   2.28e-52 179.0
## 2696   5.47e-52 178.0
## 2697   3.38e-50 174.0
## 2698   5.92e-49 171.0
## 2699   5.92e-49 171.0
## 2700   1.06e-33 130.0
## 2701   4.40e-33 128.0
## 2702   9.63e-24 102.0
## 2703   2.84e-53 182.0
## 2704   2.28e-52 179.0
## 2705   5.47e-52 178.0
## 2706   3.38e-50 174.0
## 2707   5.92e-49 171.0
## 2708   5.92e-49 171.0
## 2709   1.06e-33 130.0
## 2710   4.40e-33 128.0
## 2711   9.63e-24 102.0
## 2712   2.84e-53 182.0
## 2713   2.28e-52 179.0
## 2714   5.47e-52 178.0
## 2715   3.38e-50 174.0
## 2716   5.92e-49 171.0
## 2717   5.92e-49 171.0
```

```
## 2718   1.06e-33 130.0
## 2719   4.40e-33 128.0
## 2720   9.63e-24 102.0
## 2721   2.84e-53 182.0
## 2722   2.28e-52 179.0
## 2723   5.47e-52 178.0
## 2724   3.38e-50 174.0
## 2725   5.92e-49 171.0
## 2726   5.92e-49 171.0
## 2727   1.06e-33 130.0
## 2728   4.40e-33 128.0
## 2729   9.63e-24 102.0
## 2730   2.84e-53 182.0
## 2731   2.28e-52 179.0
## 2732   5.47e-52 178.0
## 2733   3.38e-50 174.0
## 2734   5.92e-49 171.0
## 2735   5.92e-49 171.0
## 2736   1.06e-33 130.0
## 2737   4.40e-33 128.0
## 2738   9.63e-24 102.0
## 2739   2.84e-53 182.0
## 2740   2.28e-52 179.0
## 2741   5.47e-52 178.0
## 2742   3.38e-50 174.0
## 2743   5.92e-49 171.0
## 2744   5.92e-49 171.0
## 2745   1.06e-33 130.0
## 2746   4.40e-33 128.0
## 2747   9.63e-24 102.0
## 2748   2.84e-53 182.0
## 2749   2.28e-52 179.0
## 2750   5.47e-52 178.0
## 2751   3.38e-50 174.0
## 2752   5.92e-49 171.0
## 2753   5.92e-49 171.0
## 2754   1.06e-33 130.0
## 2755   4.40e-33 128.0
## 2756   9.63e-24 102.0
## 2757   2.84e-53 182.0
## 2758   2.28e-52 179.0
## 2759   5.47e-52 178.0
## 2760   3.38e-50 174.0
## 2761   5.92e-49 171.0
## 2762   5.92e-49 171.0
## 2763   1.06e-33 130.0
## 2764   4.40e-33 128.0
## 2765   9.63e-24 102.0
## 2766   2.84e-53 182.0
## 2767   2.28e-52 179.0
## 2768   5.47e-52 178.0
## 2769   3.38e-50 174.0
## 2770   5.92e-49 171.0
## 2771   5.92e-49 171.0
```

```
## 2772   1.06e-33 130.0
## 2773   4.40e-33 128.0
## 2774   9.63e-24 102.0
## 2775   2.84e-53 182.0
## 2776   2.28e-52 179.0
## 2777   5.47e-52 178.0
## 2778   3.38e-50 174.0
## 2779   5.92e-49 171.0
## 2780   5.92e-49 171.0
## 2781   1.06e-33 130.0
## 2782   4.40e-33 128.0
## 2783   9.63e-24 102.0
## 2784   2.84e-53 182.0
## 2785   2.28e-52 179.0
## 2786   5.47e-52 178.0
## 2787   3.38e-50 174.0
## 2788   5.92e-49 171.0
## 2789   5.92e-49 171.0
## 2790   1.06e-33 130.0
## 2791   4.40e-33 128.0
## 2792   9.63e-24 102.0
## 2793   2.91e-53 182.0
## 2794   6.55e-49 171.0
## 2795   7.66e-49 171.0
## 2796   1.71e-46 164.0
## 2797   2.92e-46 164.0
## 2798   3.03e-53 184.0
## 2799   6.97e-53 184.0
## 2800   5.69e-51 179.0
## 2801   4.63e-50 176.0
## 2802   1.83e-46 166.0
## 2803   3.11e-53 190.0
## 2804   6.25e-53 189.0
## 2805   2.33e-52 187.0
## 2806   2.45e-52 187.0
## 2807   5.17e-52 186.0
## 2808   8.69e-52 186.0
## 2809   1.17e-51 185.0
## 2810   2.71e-51 184.0
## 2811   3.33e-51 184.0
## 2812   5.65e-51 183.0
## 2813   1.43e-50 182.0
## 2814   2.24e-50 182.0
## 2815   2.60e-50 181.0
## 2816   3.69e-50 181.0
## 2817   4.58e-50 181.0
## 2818   1.41e-49 179.0
## 2819   1.42e-49 179.0
## 2820   2.36e-49 179.0
## 2821   2.70e-49 179.0
## 2822   5.61e-49 177.0
## 2823   7.89e-49 177.0
## 2824   1.89e-47 173.0
## 2825   1.17e-46 171.0
```

```
## 2826   2.61e-44 164.0
## 2827   4.00e-43 161.0
## 2828   8.31e-38 145.0
## 2829   1.84e-30 124.0
## 2830   3.16e-53 182.0
## 2831   1.69e-52 181.0
## 2832   8.33e-47 166.0
## 2833   5.54e-30 120.0
## 2834   3.34e-53 191.0
## 2835   5.05e-53 190.0
## 2836   7.06e-53 189.0
## 2837   4.32e-52 187.0
## 2838   1.63e-51 186.0
## 2839   1.67e-51 186.0
## 2840   1.89e-51 185.0
## 2841   1.98e-51 185.0
## 2842   4.77e-51 184.0
## 2843   6.61e-51 184.0
## 2844   1.27e-50 183.0
## 2845   1.43e-50 183.0
## 2846   1.61e-50 182.0
## 2847   8.08e-49 178.0
## 2848   1.06e-48 177.0
## 2849   2.54e-48 176.0
## 2850   4.33e-48 176.0
## 2851   4.46e-48 176.0
## 2852   4.50e-48 176.0
## 2853   4.54e-48 176.0
## 2854   4.59e-48 176.0
## 2855   1.50e-47 174.0
## 2856   2.01e-47 174.0
## 2857   5.37e-47 172.0
## 2858   1.39e-46 171.0
## 2859   2.00e-46 171.0
## 2860   6.27e-46 169.0
## 2861   7.38e-46 169.0
## 2862   8.27e-44 163.0
## 2863   5.18e-17  84.3
## 2864   3.36e-53 182.0
## 2865   2.74e-52 180.0
## 2866   6.94e-52 179.0
## 2867   4.25e-50 174.0
## 2868   6.58e-49 171.0
## 2869   7.31e-49 171.0
## 2870   1.33e-33 130.0
## 2871   4.76e-33 128.0
## 2872   1.14e-23 102.0
## 2873   3.36e-53 182.0
## 2874   2.74e-52 180.0
## 2875   6.94e-52 179.0
## 2876   4.25e-50 174.0
## 2877   6.58e-49 171.0
## 2878   7.31e-49 171.0
## 2879   1.33e-33 130.0
```

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## 2880   4.76e-33 128.0
## 2881   1.14e-23 102.0
## 2882   3.36e-53 182.0
## 2883   2.74e-52 180.0
## 2884   6.94e-52 179.0
## 2885   4.25e-50 174.0
## 2886   6.58e-49 171.0
## 2887   7.31e-49 171.0
## 2888   1.33e-33 130.0
## 2889   4.76e-33 128.0
## 2890   1.14e-23 102.0
## 2891   3.36e-53 182.0
## 2892   2.74e-52 180.0
## 2893   6.94e-52 179.0
## 2894   4.25e-50 174.0
## 2895   6.58e-49 171.0
## 2896   7.31e-49 171.0
## 2897   1.33e-33 130.0
## 2898   4.76e-33 128.0
## 2899   1.14e-23 102.0
## 2900   3.36e-53 182.0
## 2901   2.74e-52 180.0
## 2902   6.94e-52 179.0
## 2903   4.25e-50 174.0
## 2904   6.58e-49 171.0
## 2905   7.31e-49 171.0
## 2906   1.33e-33 130.0
## 2907   4.76e-33 128.0
## 2908   1.14e-23 102.0
## 2909   3.36e-53 182.0
## 2910   2.74e-52 180.0
## 2911   6.94e-52 179.0
## 2912   4.25e-50 174.0
## 2913   6.58e-49 171.0
## 2914   7.31e-49 171.0
## 2915   1.33e-33 130.0
## 2916   4.76e-33 128.0
## 2917   1.14e-23 102.0
## 2918   3.36e-53 182.0
## 2919   2.74e-52 180.0
## 2920   6.94e-52 179.0
## 2921   4.25e-50 174.0
## 2922   6.58e-49 171.0
## 2923   7.31e-49 171.0
## 2924   1.33e-33 130.0
## 2925   4.76e-33 128.0
## 2926   1.14e-23 102.0
## 2927   3.36e-53 182.0
## 2928   2.74e-52 180.0
## 2929   6.94e-52 179.0
## 2930   4.25e-50 174.0
## 2931   6.58e-49 171.0
## 2932   7.31e-49 171.0
## 2933   1.33e-33 130.0
```

```
## 2934   4.76e-33 128.0
## 2935   1.14e-23 102.0
## 2936   3.36e-53 182.0
## 2937   2.74e-52 180.0
## 2938   6.94e-52 179.0
## 2939   4.25e-50 174.0
## 2940   6.58e-49 171.0
## 2941   7.31e-49 171.0
## 2942   1.33e-33 130.0
## 2943   4.76e-33 128.0
## 2944   1.14e-23 102.0
## 2945   3.36e-53 182.0
## 2946   2.74e-52 180.0
## 2947   6.94e-52 179.0
## 2948   4.25e-50 174.0
## 2949   6.58e-49 171.0
## 2950   7.31e-49 171.0
## 2951   1.33e-33 130.0
## 2952   4.76e-33 128.0
## 2953   1.14e-23 102.0
## 2954   3.36e-53 182.0
## 2955   2.74e-52 180.0
## 2956   6.94e-52 179.0
## 2957   4.25e-50 174.0
## 2958   6.58e-49 171.0
## 2959   7.31e-49 171.0
## 2960   1.33e-33 130.0
## 2961   4.76e-33 128.0
## 2962   1.14e-23 102.0
## 2963   3.36e-53 182.0
## 2964   2.74e-52 180.0
## 2965   6.94e-52 179.0
## 2966   4.25e-50 174.0
## 2967   6.58e-49 171.0
## 2968   7.31e-49 171.0
## 2969   1.33e-33 130.0
## 2970   4.76e-33 128.0
## 2971   1.14e-23 102.0
## 2972   3.36e-53 182.0
## 2973   2.74e-52 180.0
## 2974   6.94e-52 179.0
## 2975   4.25e-50 174.0
## 2976   6.58e-49 171.0
## 2977   7.31e-49 171.0
## 2978   1.33e-33 130.0
## 2979   4.76e-33 128.0
## 2980   1.14e-23 102.0
## 2981   3.36e-53 182.0
## 2982   2.74e-52 180.0
## 2983   6.94e-52 179.0
## 2984   4.25e-50 174.0
## 2985   6.58e-49 171.0
## 2986   7.31e-49 171.0
## 2987   1.33e-33 130.0
```

```
## 2988   4.76e-33 128.0
## 2989   1.14e-23 102.0
## 2990   3.64e-53 177.0
## 2991   2.55e-52 175.0
## 2992   3.07e-42 149.0
## 2993   4.17e-53 186.0
## 2994   7.81e-52 182.0
## 2995   2.04e-51 181.0
## 2996   4.72e-49 175.0
## 2997   6.03e-49 174.0
## 2998   6.49e-48 172.0
## 2999   1.45e-40 151.0
## 3000   1.09e-32 129.0
## 3001   4.46e-53 182.0
## 3002   5.60e-50 174.0
## 3003   5.42e-49 172.0
## 3004   1.05e-45 163.0
## 3005   2.73e-45 162.0
## 3006   4.79e-45 161.0
## 3007   9.10e-33 128.0
## 3008   4.85e-53 190.0
## 3009   1.52e-52 189.0
## 3010   2.53e-51 185.0
## 3011   3.43e-51 184.0
## 3012   7.16e-51 184.0
## 3013   9.63e-51 183.0
## 3014   1.57e-50 182.0
## 3015   2.39e-50 182.0
## 3016   2.63e-50 182.0
## 3017   1.55e-49 180.0
## 3018   2.13e-49 179.0
## 3019   2.41e-49 179.0
## 3020   1.23e-48 177.0
## 3021   1.26e-48 177.0
## 3022   1.41e-48 177.0
## 3023   3.67e-47 173.0
## 3024   5.53e-47 172.0
## 3025   1.37e-46 171.0
## 3026   1.70e-46 171.0
## 3027   1.98e-46 171.0
## 3028   2.20e-46 171.0
## 3029   4.85e-46 170.0
## 3030   6.84e-45 166.0
## 3031   2.06e-44 165.0
## 3032   3.60e-43 161.0
## 3033   1.15e-42 160.0
## 3034   1.63e-36 142.0
## 3035   3.20e+00  31.6
## 3036   4.88e-53 190.0
## 3037   6.48e-51 184.0
## 3038   8.15e-51 184.0
## 3039   1.17e-50 183.0
## 3040   1.38e-50 183.0
## 3041   2.46e-50 182.0
```

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## 3042   5.14e-50 181.0
## 3043   8.51e-50 181.0
## 3044   2.13e-49 179.0
## 3045   3.80e-49 179.0
## 3046   5.21e-49 178.0
## 3047   1.12e-48 177.0
## 3048   1.14e-48 177.0
## 3049   1.23e-48 177.0
## 3050   1.28e-48 177.0
## 3051   1.45e-48 177.0
## 3052   1.57e-48 177.0
## 3053   1.80e-48 177.0
## 3054   2.63e-48 176.0
## 3055   3.54e-48 176.0
## 3056   7.10e-48 175.0
## 3057   8.34e-48 175.0
## 3058   9.00e-48 175.0
## 3059   1.09e-47 174.0
## 3060   1.40e-47 174.0
## 3061   4.59e-47 173.0
## 3062   1.06e-46 172.0
## 3063   1.18e-46 172.0
## 3064   1.57e-46 171.0
## 3065   1.72e-46 171.0
## 3066   1.86e-46 171.0
## 3067   3.87e-46 170.0
## 3068   4.14e-46 170.0
## 3069   1.65e-45 168.0
## 3070   1.57e-44 166.0
## 3071   3.49e-44 164.0
## 3072   5.13e-43 161.0
## 3073   7.76e-42 157.0
## 3074   1.36e-39 151.0
## 3075   4.43e-32 129.0
## 3076   5.06e-53 180.0
## 3077   1.17e-52 179.0
## 3078   7.91e-52 177.0
## 3079   3.96e-51 175.0
## 3080   6.36e-37 137.0
## 3081   5.12e-53 180.0
## 3082   6.40e-53 180.0
## 3083   1.10e-52 179.0
## 3084   1.39e-50 174.0
## 3085   7.44e-48 167.0
## 3086   2.05e-31 123.0
## 3087   3.01e-27 111.0
## 3088   6.60e-11  64.3
## 3089   5.93e-53 181.0
## 3090   1.76e-48 169.0
## 3091   6.29e-48 168.0
## 3092   2.20e-46 164.0
## 3093   3.95e-39 144.0
## 3094   1.18e-31 124.0
## 3095   6.33e-53 184.0
```

```
## 3096   3.05e-52 182.0
## 3097   5.83e-52 181.0
## 3098   2.64e-51 179.0
## 3099   3.60e-51 179.0
## 3100   9.08e-51 178.0
## 3101   7.55e-49 173.0
## 3102   3.03e-47 169.0
## 3103   4.87e-39 146.0
## 3104   6.33e-53 185.0
## 3105   1.41e-51 181.0
## 3106   2.68e-50 178.0
## 3107   2.70e-49 175.0
## 3108   5.58e-49 174.0
## 3109   4.29e-45 164.0
## 3110   2.22e-44 162.0
## 3111   2.01e-31 126.0
## 3112   6.35e-53 181.0
## 3113   3.65e-51 176.0
## 3114   4.85e-51 176.0
## 3115   3.35e-48 168.0
## 3116   5.66e-48 167.0
## 3117   3.00e-39 144.0
## 3118   6.92e-53 179.0
## 3119   1.34e-50 173.0
## 3120   1.65e-47 165.0
## 3121   3.11e-47 164.0
## 3122   7.27e-53 181.0
## 3123   6.11e-52 179.0
## 3124   4.11e-49 171.0
## 3125   5.83e-48 168.0
## 3126   2.78e-41 150.0
## 3127   7.43e-53 181.0
## 3128   2.20e-52 180.0
## 3129   2.95e-49 172.0
## 3130   3.22e-47 166.0
## 3131   1.28e-45 162.0
## 3132   4.68e-31 123.0
## 3133   7.43e-53 181.0
## 3134   2.20e-52 180.0
## 3135   2.95e-49 172.0
## 3136   3.22e-47 166.0
## 3137   1.28e-45 162.0
## 3138   4.68e-31 123.0
## 3139   7.54e-53 180.0
## 3140   4.14e-50 173.0
## 3141   7.64e-50 172.0
## 3142   4.01e-47 165.0
## 3143   2.65e-36 136.0
## 3144   3.31e-29 117.0
## 3145   7.55e-53 181.0
## 3146   1.12e-52 181.0
## 3147   1.35e-52 181.0
## 3148   2.14e-52 180.0
## 3149   6.83e-52 179.0
```

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## 3150   1.38e-51 178.0
## 3151   7.63e-53 187.0
## 3152   5.78e-48 174.0
## 3153   6.90e-48 174.0
## 3154   9.30e-48 173.0
## 3155   1.65e-47 172.0
## 3156   1.37e-46 170.0
## 3157   1.84e-45 167.0
## 3158   2.92e-45 166.0
## 3159   2.15e-44 164.0
## 3160   5.97e-44 162.0
## 3161   9.20e-44 162.0
## 3162   3.26e-42 158.0
## 3163   2.12e-41 155.0
## 3164   1.27e-17  85.9
## 3165   2.43e-06  50.8
## 3166   5.69e-06  49.7
## 3167   7.64e-53 181.0
## 3168   3.43e-52 179.0
## 3169   9.68e-48 167.0
## 3170   4.54e-46 163.0
## 3171   4.01e-45 160.0
## 3172   6.58e-42 152.0
## 3173   1.27e-28 116.0
## 3174   8.31e-53 179.0
## 3175   6.54e-52 176.0
## 3176   1.12e-48 168.0
## 3177   1.23e-47 165.0
## 3178   1.98e-07  53.5
## 3179   8.31e-53 179.0
## 3180   6.54e-52 176.0
## 3181   1.12e-48 168.0
## 3182   1.23e-47 165.0
## 3183   1.98e-07  53.5
## 3184   9.11e-53 181.0
## 3185   7.69e-52 178.0
## 3186   1.75e-51 177.0
## 3187   2.28e-51 177.0
## 3188   2.28e-51 177.0
## 3189   3.98e-51 176.0
## 3190   5.04e-48 168.0
## 3191   2.21e-38 142.0
## 3192   9.66e-53 182.0
## 3193   1.13e-52 182.0
## 3194   1.44e-52 181.0
## 3195   2.03e-52 181.0
## 3196   7.47e-52 180.0
## 3197   1.55e-51 179.0
## 3198   1.03e-47 169.0
## 3199   1.05e-52 181.0
## 3200   2.85e-51 177.0
## 3201   1.65e-50 175.0
## 3202   3.75e-46 163.0
## 3203   8.43e-45 160.0
```

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## 3204   3.55e-30 120.0
## 3205   1.13e-52 181.0
## 3206   3.13e-45 162.0
## 3207   4.51e-43 156.0
## 3208   6.07e-34 131.0
## 3209   7.89e-08  55.1
## 3210   1.22e-52 181.0
## 3211   2.30e-51 177.0
## 3212   1.84e-49 172.0
## 3213   2.63e-46 164.0
## 3214   7.80e-45 160.0
## 3215   1.43e-28 116.0
## 3216   1.22e-52 184.0
## 3217   4.91e-52 182.0
## 3218   4.13e-49 174.0
## 3219   6.71e-49 174.0
## 3220   3.11e-48 172.0
## 3221   6.54e-48 171.0
## 3222   8.37e-47 168.0
## 3223   1.72e-42 156.0
## 3224   8.41e-42 154.0
## 3225   4.08e-38 144.0
## 3226   1.03e-35 137.0
## 3227   1.38e-35 137.0
## 3228   1.22e-52 184.0
## 3229   4.91e-52 182.0
## 3230   4.13e-49 174.0
## 3231   6.71e-49 174.0
## 3232   3.11e-48 172.0
## 3233   6.54e-48 171.0
## 3234   8.37e-47 168.0
## 3235   1.72e-42 156.0
## 3236   8.41e-42 154.0
## 3237   4.08e-38 144.0
## 3238   1.03e-35 137.0
## 3239   1.38e-35 137.0
## 3240   1.22e-52 184.0
## 3241   4.91e-52 182.0
## 3242   4.13e-49 174.0
## 3243   6.71e-49 174.0
## 3244   3.11e-48 172.0
## 3245   6.54e-48 171.0
## 3246   8.37e-47 168.0
## 3247   1.72e-42 156.0
## 3248   8.41e-42 154.0
## 3249   4.08e-38 144.0
## 3250   1.03e-35 137.0
## 3251   1.38e-35 137.0
## 3252   1.34e-52 181.0
## 3253   1.28e-46 165.0
## 3254   6.86e-46 163.0
## 3255   3.10e-44 159.0
## 3256   3.12e-43 156.0
## 3257   2.20e-01  35.0
```

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## 3258   1.40e-52 182.0
## 3259   2.37e-51 179.0
## 3260   1.75e-50 177.0
## 3261   2.92e-47 168.0
## 3262   2.08e-46 166.0
## 3263   2.96e-46 166.0
## 3264   3.60e-45 162.0
## 3265   6.55e-45 162.0
## 3266   7.37e-41 151.0
## 3267   8.48e-06  48.9
## 3268   1.42e-52 179.0
## 3269   8.47e-52 177.0
## 3270   1.46e-48 169.0
## 3271   5.06e-43 154.0
## 3272   5.45e-43 154.0
## 3273   1.82e-40 147.0
## 3274   2.41e-40 147.0
## 3275   1.22e-32 126.0
## 3276   2.68e-19  89.4
## 3277   7.02e-19  88.2
## 3278   1.42e-52 179.0
## 3279   8.47e-52 177.0
## 3280   1.46e-48 169.0
## 3281   5.06e-43 154.0
## 3282   5.45e-43 154.0
## 3283   1.82e-40 147.0
## 3284   2.41e-40 147.0
## 3285   1.22e-32 126.0
## 3286   2.68e-19  89.4
## 3287   7.02e-19  88.2
## 3288   1.53e-52 174.0
## 3289   1.23e-45 156.0
## 3290   1.02e-34 127.0
## 3291   1.53e-52 186.0
## 3292   5.18e-52 184.0
## 3293   5.85e-52 184.0
## 3294   3.41e-51 182.0
## 3295   7.45e-50 178.0
## 3296   3.03e-49 177.0
## 3297   7.81e-49 176.0
## 3298   8.55e-49 176.0
## 3299   2.03e-47 172.0
## 3300   2.09e-47 172.0
## 3301   3.38e-47 171.0
## 3302   2.15e-46 169.0
## 3303   3.28e-46 168.0
## 3304   4.94e-46 168.0
## 3305   6.87e-46 167.0
## 3306   7.44e-46 167.0
## 3307   7.57e-41 153.0
## 3308   5.80e-31 125.0
## 3309   3.00e-16  81.6
## 3310   1.56e-52 185.0
## 3311   5.04e-52 184.0
```

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## 3312   4.16e-51 181.0
## 3313   1.34e-50 180.0
## 3314   3.09e-50 179.0
## 3315   7.72e-50 178.0
## 3316   2.22e-49 177.0
## 3317   4.21e-49 176.0
## 3318   9.66e-49 175.0
## 3319   6.75e-48 172.0
## 3320   2.98e-47 171.0
## 3321   2.45e-46 168.0
## 3322   1.37e-45 166.0
## 3323   6.30e-43 159.0
## 3324   1.58e-52 180.0
## 3325   1.60e-48 169.0
## 3326   2.74e-48 169.0
## 3327   1.23e-46 164.0
## 3328   1.94e-40 148.0
## 3329   1.61e-30 121.0
## 3330   1.61e-52 189.0
## 3331   2.00e-52 188.0
## 3332   1.78e-51 186.0
## 3333   2.26e-51 185.0
## 3334   1.07e-50 183.0
## 3335   1.25e-50 183.0
## 3336   1.63e-50 183.0
## 3337   3.03e-50 182.0
## 3338   4.57e-50 181.0
## 3339   7.72e-50 181.0
## 3340   9.80e-50 181.0
## 3341   2.04e-49 179.0
## 3342   5.61e-49 178.0
## 3343   6.29e-49 178.0
## 3344   1.24e-48 177.0
## 3345   1.24e-48 177.0
## 3346   1.63e-48 177.0
## 3347   1.63e-48 177.0
## 3348   2.09e-48 177.0
## 3349   3.46e-48 176.0
## 3350   1.91e-47 174.0
## 3351   4.12e-47 173.0
## 3352   4.33e-47 173.0
## 3353   1.52e-46 171.0
## 3354   2.93e-46 171.0
## 3355   7.38e-46 169.0
## 3356   1.21e-45 169.0
## 3357   1.93e-45 168.0
## 3358   5.29e-45 167.0
## 3359   6.65e-45 166.0
## 3360   1.04e-44 166.0
## 3361   1.09e-44 166.0
## 3362   5.76e-44 164.0
## 3363   6.70e-44 164.0
## 3364   1.63e-42 159.0
## 3365   1.43e-30 124.0
```

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## 3366   1.71e-11  67.4
## 3367   1.64e-52 182.0
## 3368   2.27e-50 177.0
## 3369   4.41e-50 176.0
## 3370   7.12e-50 175.0
## 3371   1.78e-48 172.0
## 3372   1.09e-47 169.0
## 3373   1.88e-47 169.0
## 3374   1.13e-46 167.0
## 3375   1.06e-45 164.0
## 3376   4.25e-44 160.0
## 3377   3.47e-41 152.0
## 3378   1.13e-23 103.0
## 3379   1.70e-52 179.0
## 3380   1.50e-50 174.0
## 3381   2.44e-50 174.0
## 3382   1.57e-48 169.0
## 3383   4.03e-45 160.0
## 3384   1.82e-52 177.0
## 3385   1.70e-50 172.0
## 3386   4.01e-46 161.0
## 3387   9.42e-12  66.6
## 3388   1.87e-52 182.0
## 3389   3.50e-52 182.0
## 3390   5.43e-52 181.0
## 3391   1.87e-51 180.0
## 3392   5.83e-51 178.0
## 3393   6.60e-51 178.0
## 3394   2.72e-50 177.0
## 3395   3.56e-50 176.0
## 3396   4.33e-48 171.0
## 3397   4.52e-48 171.0
## 3398   2.02e-52 179.0
## 3399   4.61e-52 177.0
## 3400   8.85e-51 174.0
## 3401   2.42e-28 114.0
## 3402   2.04e-52 179.0
## 3403   1.81e-50 174.0
## 3404   5.24e-47 165.0
## 3405   6.28e-45 160.0
## 3406   2.91e-26 109.0
## 3407   2.10e-52 181.0
## 3408   3.81e-47 167.0
## 3409   3.38e-45 162.0
## 3410   5.66e-44 159.0
## 3411   4.27e-42 154.0
## 3412   2.25e-52 178.0
## 3413   8.46e-48 166.0
## 3414   5.84e-46 161.0
## 3415   1.07e-28 115.0
## 3416   2.29e-52 188.0
## 3417   4.02e-52 187.0
## 3418   5.41e-52 187.0
## 3419   7.20e-52 187.0
```

```
## 3420   7.20e-52 187.0
## 3421   6.29e-51 184.0
## 3422   1.46e-50 183.0
## 3423   2.01e-50 182.0
## 3424   2.56e-50 182.0
## 3425   7.16e-50 181.0
## 3426   1.28e-49 180.0
## 3427   1.37e-49 180.0
## 3428   1.05e-48 177.0
## 3429   4.98e-48 176.0
## 3430   5.76e-47 172.0
## 3431   7.38e-47 172.0
## 3432   1.44e-46 171.0
## 3433   1.05e-45 169.0
## 3434   5.35e-45 167.0
## 3435   2.75e-44 164.0
## 3436   3.90e-44 164.0
## 3437   6.71e-44 164.0
## 3438   1.82e-41 156.0
## 3439   5.17e-41 155.0
## 3440   6.48e-36 140.0
## 3441   8.07e-33 131.0
## 3442   5.13e-25 108.0
## 3443   4.85e-16  81.3
## 3444   3.34e-09  60.1
## 3445   2.30e-52 186.0
## 3446   2.33e-51 184.0
## 3447   1.99e-50 181.0
## 3448   2.22e-50 181.0
## 3449   2.36e-50 181.0
## 3450   3.06e-50 181.0
## 3451   4.37e-50 180.0
## 3452   1.38e-49 179.0
## 3453   2.71e-49 178.0
## 3454   9.58e-46 168.0
## 3455   4.30e-44 163.0
## 3456   2.53e-52 181.0
## 3457   3.81e-52 180.0
## 3458   7.23e-52 179.0
## 3459   2.95e-49 172.0
## 3460   3.89e-48 170.0
## 3461   8.56e-46 163.0
## 3462   1.98e-28 116.0
## 3463   3.30e+00  31.2
## 3464   2.58e-52 179.0
## 3465   7.27e-52 178.0
## 3466   1.65e-46 164.0
## 3467   4.41e-46 163.0
## 3468   1.52e-43 156.0
## 3469   4.33e-29 117.0
## 3470   2.66e-52 187.0
## 3471   3.55e-47 172.0
## 3472   6.09e-47 172.0
## 3473   7.91e-47 172.0
```

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## 3474   8.62e-47 172.0
## 3475   1.61e-46 171.0
## 3476   1.18e-45 168.0
## 3477   9.24e-45 166.0
## 3478   1.52e-44 165.0
## 3479   2.07e-44 165.0
## 3480   1.40e-43 162.0
## 3481   1.52e-42 159.0
## 3482   5.26e-42 158.0
## 3483   8.81e-42 157.0
## 3484   1.04e-40 154.0
## 3485   1.91e-40 153.0
## 3486   1.40e-17  85.9
## 3487   1.05e-06  52.0
## 3488   2.67e-52 179.0
## 3489   6.37e-48 168.0
## 3490   4.76e-42 152.0
## 3491   3.95e-30 120.0
## 3492   2.67e-52 178.0
## 3493   2.67e-52 178.0
## 3494   2.78e-52 175.0
## 3495   5.93e-48 164.0
## 3496   5.28e-34 127.0
## 3497   6.36e-21  92.4
## 3498   2.80e-52 180.0
## 3499   6.51e-52 179.0
## 3500   1.13e-51 178.0
## 3501   3.44e-49 172.0
## 3502   2.18e-48 169.0
## 3503   5.53e-48 168.0
## 3504   9.18e-33 127.0
## 3505   3.87e-24 103.0
## 3506   2.80e-52 180.0
## 3507   6.51e-52 179.0
## 3508   1.13e-51 178.0
## 3509   3.44e-49 172.0
## 3510   2.18e-48 169.0
## 3511   5.53e-48 168.0
## 3512   9.18e-33 127.0
## 3513   3.87e-24 103.0
## 3514   2.80e-52 180.0
## 3515   6.51e-52 179.0
## 3516   1.13e-51 178.0
## 3517   3.44e-49 172.0
## 3518   2.18e-48 169.0
## 3519   5.53e-48 168.0
## 3520   9.18e-33 127.0
## 3521   3.87e-24 103.0
## 3522   2.80e-52 180.0
## 3523   6.51e-52 179.0
## 3524   1.13e-51 178.0
## 3525   3.44e-49 172.0
## 3526   2.18e-48 169.0
## 3527   5.53e-48 168.0
```

```
## 3528   9.18e-33 127.0
## 3529   3.87e-24 103.0
## 3530   2.80e-52 180.0
## 3531   6.51e-52 179.0
## 3532   1.13e-51 178.0
## 3533   3.44e-49 172.0
## 3534   2.18e-48 169.0
## 3535   5.53e-48 168.0
## 3536   9.18e-33 127.0
## 3537   3.87e-24 103.0
## 3538   2.81e-52 178.0
## 3539   3.05e-47 165.0
## 3540   4.48e-38 141.0
## 3541   2.44e-28 114.0
## 3542   2.89e-52 179.0
## 3543   1.34e-47 167.0
## 3544   2.32e-44 158.0
## 3545   2.24e-38 142.0
## 3546   4.01e-28 114.0
## 3547   2.94e-52 177.0
## 3548   3.35e-49 169.0
## 3549   2.23e-46 162.0
## 3550   2.17e-34 130.0
## 3551   1.23e-30 120.0
## 3552   3.00e-52 179.0
## 3553   2.85e-50 174.0
## 3554   8.94e-49 170.0
## 3555   7.28e-46 162.0
## 3556   1.25e-25 107.0
## 3557   5.66e-10  61.6
## 3558   3.12e-52 180.0
## 3559   7.85e-52 179.0
## 3560   9.48e-52 179.0
## 3561   3.05e-50 175.0
## 3562   8.69e-49 171.0
## 3563   3.64e-48 169.0
## 3564   1.85e-46 165.0
## 3565   1.26e-40 149.0
## 3566   3.13e-52 179.0
## 3567   3.30e-52 179.0
## 3568   9.11e-52 178.0
## 3569   6.42e-51 176.0
## 3570   2.58e-50 174.0
## 3571   2.69e-50 174.0
## 3572   4.04e-46 163.0
## 3573   7.80e-40 146.0
## 3574   1.50e-36 137.0
## 3575   2.57e-23 101.0
## 3576   3.18e-52 177.0
## 3577   4.89e-50 172.0
## 3578   3.36e-49 170.0
## 3579   6.45e-33 127.0
## 3580   3.19e-52 186.0
## 3581   6.23e-52 185.0
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## 3582   8.93e-52 185.0
## 3583   9.80e-51 182.0
## 3584   1.26e-50 181.0
## 3585   3.14e-50 180.0
## 3586   3.84e-50 180.0
## 3587   1.18e-49 179.0
## 3588   4.65e-49 177.0
## 3589   6.08e-49 177.0
## 3590   7.87e-49 176.0
## 3591   4.00e-48 174.0
## 3592   6.36e-48 174.0
## 3593   7.67e-47 171.0
## 3594   4.48e-46 169.0
## 3595   4.70e-46 169.0
## 3596   2.36e-45 167.0
## 3597   2.01e-41 155.0
## 3598   3.29e-52 188.0
## 3599   1.42e-51 186.0
## 3600   2.58e-51 185.0
## 3601   6.65e-51 184.0
## 3602   1.05e-50 183.0
## 3603   2.23e-50 182.0
## 3604   3.06e-50 182.0
## 3605   8.99e-50 181.0
## 3606   1.03e-49 181.0
## 3607   1.30e-48 177.0
## 3608   1.57e-48 177.0
## 3609   3.96e-48 176.0
## 3610   4.56e-48 176.0
## 3611   8.01e-48 175.0
## 3612   8.24e-48 175.0
## 3613   1.08e-47 174.0
## 3614   1.15e-47 174.0
## 3615   1.78e-47 174.0
## 3616   3.31e-47 173.0
## 3617   3.64e-47 173.0
## 3618   5.43e-47 172.0
## 3619   1.35e-46 171.0
## 3620   1.82e-46 171.0
## 3621   9.09e-46 169.0
## 3622   2.06e-45 168.0
## 3623   4.81e-45 167.0
## 3624   5.34e-45 167.0
## 3625   1.27e-44 166.0
## 3626   1.53e-44 166.0
## 3627   2.08e-44 165.0
## 3628   1.65e-43 162.0
## 3629   8.63e-43 160.0
## 3630   2.11e-42 159.0
## 3631   3.32e-52 179.0
## 3632   2.29e-47 166.0
## 3633   3.31e-44 158.0
## 3634   1.09e-38 143.0
## 3635   9.90e-29 116.0
```

```
## 3636   3.38e-52 180.0
## 3637   7.43e-52 179.0
## 3638   1.32e-51 179.0
## 3639   3.69e-49 172.0
## 3640   2.45e-48 170.0
## 3641   8.23e-48 169.0
## 3642   9.95e-33 128.0
## 3643   4.26e-24 103.0
## 3644   3.40e-52 177.0
## 3645   2.89e-51 174.0
## 3646   8.09e-51 173.0
## 3647   9.69e-51 173.0
## 3648   1.46e-47 165.0
## 3649   7.61e-44 155.0
## 3650   2.98e-37 137.0
## 3651   6.45e-32 123.0
## 3652   3.51e-52 172.0
## 3653   7.42e-46 156.0
## 3654   2.56e-39 139.0
## 3655   3.73e-52 180.0
## 3656   7.78e-52 179.0
## 3657   3.64e-51 177.0
## 3658   4.94e-50 174.0
## 3659   5.96e-49 172.0
## 3660   1.50e-47 168.0
## 3661   1.55e-47 168.0
## 3662   1.89e-46 165.0
## 3663   2.37e-46 165.0
## 3664   3.31e-46 164.0
## 3665   6.00e-44 158.0
## 3666   4.47e-33 129.0
## 3667   1.49e-25 108.0
## 3668   4.06e-52 173.0
## 3669   1.26e-43 151.0
## 3670   5.48e-38 136.0
## 3671   1.00e-37 135.0
## 3672   4.09e-52 178.0
## 3673   7.52e-51 174.0
## 3674   9.09e-51 174.0
## 3675   2.40e-48 168.0
## 3676   2.15e-45 160.0
## 3677   4.21e-52 177.0
## 3678   1.69e-49 170.0
## 3679   6.28e-43 153.0
## 3680   4.22e-41 148.0
## 3681   4.36e-52 187.0
## 3682   5.17e-50 181.0
## 3683   7.82e-50 181.0
## 3684   2.08e-49 179.0
## 3685   5.65e-49 178.0
## 3686   7.33e-49 178.0
## 3687   1.16e-48 177.0
## 3688   1.95e-48 176.0
## 3689   1.98e-47 174.0
```

```
## 3690   2.99e-47 173.0
## 3691   4.14e-47 172.0
## 3692   6.06e-47 172.0
## 3693   1.22e-46 171.0
## 3694   2.06e-46 171.0
## 3695   2.94e-46 170.0
## 3696   3.17e-46 170.0
## 3697   2.64e-45 167.0
## 3698   3.55e-45 167.0
## 3699   7.68e-45 166.0
## 3700   1.44e-44 165.0
## 3701   1.07e-43 163.0
## 3702   1.47e-42 159.0
## 3703   1.04e-39 151.0
## 3704   2.47e-37 144.0
## 3705   4.15e-23 102.0
## 3706   4.51e-52 179.0
## 3707   3.46e-48 168.0
## 3708   6.77e-48 167.0
## 3709   7.59e-46 162.0
## 3710   2.58e-43 155.0
## 3711   1.60e-29 118.0
## 3712   2.80e+00  31.2
## 3713   4.76e-52 177.0
## 3714   1.98e-48 168.0
## 3715   2.22e-45 160.0
## 3716   1.26e-34 131.0
## 3717   1.10e-29 118.0
## 3718   4.85e-52 178.0
## 3719   1.09e-48 169.0
## 3720   7.02e-43 154.0
## 3721   3.80e-37 138.0
## 3722   9.79e-14  73.2
## 3723   4.96e-52 177.0
## 3724   2.28e-51 176.0
## 3725   1.85e-44 157.0
## 3726   2.11e-39 144.0
## 3727   2.23e-26 109.0
## 3728   1.47e-10  63.2
## 3729   5.44e-52 178.0
## 3730   1.74e-47 166.0
## 3731   5.29e-44 157.0
## 3732   1.26e-43 156.0
## 3733   2.63e-30 120.0
## 3734   5.46e-52 176.0
## 3735   1.66e-48 167.0
## 3736   2.55e-45 159.0
## 3737   8.24e-15  75.5
## 3738   5.55e-52 181.0
## 3739   1.44e-51 180.0
## 3740   9.58e-51 177.0
## 3741   4.89e-49 173.0
## 3742   1.33e-47 169.0
## 3743   7.12e-45 162.0
```

```
## 3744   1.36e-44 161.0
## 3745   8.55e-31 123.0
## 3746   5.65e-52 186.0
## 3747   1.82e-49 179.0
## 3748   8.00e-48 174.0
## 3749   2.69e-47 173.0
## 3750   1.66e-46 171.0
## 3751   2.10e-46 171.0
## 3752   8.71e-46 169.0
## 3753   3.03e-45 167.0
## 3754   4.40e-45 167.0
## 3755   4.71e-45 167.0
## 3756   1.70e-44 165.0
## 3757   2.93e-44 164.0
## 3758   1.92e-43 162.0
## 3759   8.95e-43 160.0
## 3760   7.01e-42 157.0
## 3761   2.76e-41 155.0
## 3762   1.24e-39 151.0
## 3763   2.67e-18  88.2
## 3764   5.70e-52 176.0
## 3765   4.02e-43 153.0
## 3766   2.40e-02  37.7
## 3767   5.73e-52 177.0
## 3768   7.85e-51 174.0
## 3769   2.80e-49 170.0
## 3770   9.85e-34 129.0
## 3771   6.08e-52 177.0
## 3772   7.91e-51 174.0
## 3773   2.72e-49 170.0
## 3774   3.45e-33 127.0
## 3775   6.39e-52 178.0
## 3776   2.66e-48 169.0
## 3777   9.44e-45 159.0
## 3778   2.33e-38 142.0
## 3779   1.06e-28 116.0
## 3780   7.21e-52 177.0
## 3781   6.52e-48 167.0
## 3782   9.98e-42 151.0
## 3783   1.70e-41 150.0
## 3784   1.52e-37 140.0
## 3785   7.32e-52 177.0
## 3786   8.49e-50 172.0
## 3787   1.12e-37 139.0
## 3788   5.16e-08  55.5
## 3789   7.36e-52 177.0
## 3790   1.06e-50 174.0
## 3791   3.29e-49 170.0
## 3792   1.30e-33 129.0
## 3793   7.67e-52 178.0
## 3794   7.25e-50 172.0
## 3795   8.69e-47 164.0
## 3796   2.04e-44 158.0
## 3797   2.69e-25 106.0
```

```
## 3798   8.09e-52 175.0
## 3799   2.21e-41 148.0
## 3800   6.08e-36 133.0
## 3801   7.23e-06  48.5
## 3802   6.20e-01  33.1
## 3803   8.12e-52 179.0
## 3804   2.32e-51 178.0
## 3805   2.49e-49 173.0
## 3806   2.63e-49 173.0
## 3807   3.06e-47 167.0
## 3808   2.87e-46 165.0
## 3809   1.80e-45 162.0
## 3810   9.10e-45 160.0
## 3811   2.55e-43 157.0
## 3812   1.77e-04  44.7
## 3813   8.14e-52 174.0
## 3814   2.11e-48 166.0
## 3815   8.19e-52 180.0
## 3816   9.38e-51 177.0
## 3817   8.07e-50 174.0
## 3818   7.75e-48 169.0
## 3819   9.25e-48 169.0
## 3820   2.00e-47 168.0
## 3821   1.98e-46 166.0
## 3822   3.45e-44 159.0
## 3823   6.47e-41 150.0
## 3824   6.89e-41 150.0
## 3825   9.33e-52 179.0
## 3826   1.46e-49 173.0
## 3827   9.76e-49 171.0
## 3828   2.01e-48 170.0
## 3829   3.56e-45 161.0
## 3830   1.45e-35 135.0
## 3831   5.59e-31 123.0
## 3832   9.46e-52 186.0
## 3833   2.90e-51 185.0
## 3834   1.32e-50 183.0
## 3835   1.52e-50 182.0
## 3836   1.58e-50 182.0
## 3837   5.43e-50 181.0
## 3838   1.96e-49 179.0
## 3839   2.30e-49 179.0
## 3840   3.24e-49 179.0
## 3841   5.23e-49 178.0
## 3842   5.38e-49 178.0
## 3843   5.44e-49 178.0
## 3844   8.28e-49 177.0
## 3845   9.92e-49 177.0
## 3846   1.08e-48 177.0
## 3847   1.13e-48 177.0
## 3848   1.18e-48 177.0
## 3849   1.55e-48 177.0
## 3850   1.57e-48 177.0
## 3851   4.12e-48 176.0
```

```
## 3852   7.16e-48 175.0
## 3853   2.34e-47 173.0
## 3854   3.33e-47 173.0
## 3855   7.07e-47 172.0
## 3856   7.20e-47 172.0
## 3857   1.17e-46 171.0
## 3858   1.60e-46 171.0
## 3859   1.01e-36 142.0
## 3860   2.52e-10  63.5
## 3861   4.46e-06  50.1
## 3862   9.70e-52 179.0
## 3863   8.43e-48 169.0
## 3864   3.60e-46 164.0
## 3865   9.34e-45 161.0
## 3866   1.73e-39 147.0
## 3867   3.24e-39 146.0
## 3868   9.02e-38 142.0
## 3869   9.17e-20  91.7
## 3870   1.74e-12  69.7
## 3871   9.71e-52 177.0
## 3872   4.37e-51 175.0
## 3873   2.14e-44 157.0
## 3874   2.15e-42 152.0
## 3875   2.92e-26 108.0
## 3876   1.41e-13  72.4
## 3877   1.02e-51 177.0
## 3878   5.66e-48 167.0
## 3879   2.53e-46 162.0
## 3880   9.15e-44 156.0
## 3881   1.06e-51 178.0
## 3882   1.10e-51 178.0
## 3883   9.16e-49 171.0
## 3884   6.22e-47 166.0
## 3885   2.11e-46 164.0
## 3886   1.18e-44 160.0
## 3887   1.95e-28 115.0
## 3888   1.11e-51 177.0
## 3889   2.85e-51 176.0
## 3890   1.49e-48 169.0
## 3891   2.14e-28 115.0
## 3892   5.89e-04  42.7
## 3893   1.12e-51 180.0
## 3894   5.69e-48 170.0
## 3895   2.78e-31 125.0
## 3896   7.43e-16  80.1
## 3897   1.14e-51 177.0
## 3898   9.45e-48 166.0
## 3899   5.00e-45 159.0
## 3900   3.93e-29 117.0
## 3901   1.14e-51 176.0
## 3902   6.59e-41 147.0
## 3903   1.42e-38 141.0
## 3904   5.43e-34 129.0
## 3905   4.40e-25 105.0
```

```
## 3906   1.22e-51 176.0
## 3907   2.35e-51 176.0
## 3908   2.13e-49 171.0
## 3909   6.35e-30 119.0
## 3910   2.17e-16  80.9
## 3911   1.23e-51 180.0
## 3912   5.80e-48 170.0
## 3913   2.78e-31 125.0
## 3914   7.71e-16  80.1
## 3915   1.26e-51 174.0
## 3916   2.33e-39 142.0
## 3917   1.66e-33 127.0
## 3918   1.36e-51 174.0
## 3919   2.70e-50 170.0
## 3920   1.01e-48 166.0
## 3921   2.01e-26 107.0
## 3922   2.88e-21  93.2
## 3923   1.41e-51 176.0
## 3924   9.06e-48 166.0
## 3925   1.10e-36 137.0
## 3926   3.25e-27 111.0
## 3927   1.53e-51 176.0
## 3928   1.38e-47 166.0
## 3929   2.66e-45 160.0
## 3930   1.08e-34 132.0
## 3931   1.79e-29 117.0
## 3932   1.53e-51 176.0
## 3933   1.38e-47 166.0
## 3934   2.66e-45 160.0
## 3935   1.08e-34 132.0
## 3936   1.79e-29 117.0
## 3937   1.53e-51 175.0
## 3938   2.86e-48 167.0
## 3939   4.76e-48 166.0
## 3940   3.60e-46 161.0
## 3941   1.58e-51 176.0
## 3942   8.87e-48 166.0
## 3943   2.86e-45 160.0
## 3944   6.19e-29 116.0
## 3945   1.61e-51 177.0
## 3946   4.39e-47 165.0
## 3947   1.57e-44 159.0
## 3948   4.30e-35 133.0
## 3949   7.53e-34 130.0
## 3950   1.64e-51 175.0
## 3951   1.87e-48 167.0
## 3952   6.39e-48 166.0
## 3953   1.01e-28 115.0
## 3954   1.15e-19  90.1
## 3955   1.45e-08  57.0
## 3956   1.67e-51 175.0
## 3957   1.49e-49 170.0
## 3958   7.08e-48 166.0
## 3959   9.40e-31 120.0
```

```
## 3960   1.45e-16  80.9
## 3961   8.10e+00  29.6
## 3962   1.72e-51 173.0
## 3963   7.67e-51 171.0
## 3964   2.73e-47 162.0
## 3965   1.72e-46 160.0
## 3966   1.07e-35 132.0
## 3967   1.75e-51 176.0
## 3968   4.78e-47 164.0
## 3969   2.29e-45 160.0
## 3970   1.98e-32 125.0
## 3971   3.48e-30 119.0
## 3972   1.94e-51 182.0
## 3973   1.49e-47 172.0
## 3974   2.78e-46 169.0
## 3975   2.89e-46 168.0
## 3976   1.08e-44 164.0
## 3977   5.40e-44 162.0
## 3978   1.19e-43 161.0
## 3979   2.17e-43 160.0
## 3980   2.78e-43 160.0
## 3981   2.79e-39 149.0
## 3982   3.67e-39 149.0
## 3983   4.74e-39 148.0
## 3984   1.07e-35 139.0
## 3985   1.96e-51 177.0
## 3986   3.50e-46 163.0
## 3987   3.25e-45 160.0
## 3988   5.42e-45 160.0
## 3989   6.39e-43 154.0
## 3990   4.07e-33 128.0
## 3991   8.37e-32 124.0
## 3992   1.09e-23 102.0
## 3993   4.11e-12  68.2
## 3994   2.01e-51 177.0
## 3995   1.88e-49 172.0
## 3996   7.92e-48 167.0
## 3997   1.45e-44 159.0
## 3998   5.66e-32 125.0
## 3999   2.10e-51 176.0
## 4000   7.40e-48 167.0
## 4001   2.49e-46 162.0
## 4002   6.99e-35 132.0
## 4003   1.82e-30 120.0
## 4004   2.10e-51 176.0
## 4005   7.40e-48 167.0
## 4006   2.49e-46 162.0
## 4007   6.99e-35 132.0
## 4008   1.82e-30 120.0
## 4009   2.13e-51 178.0
## 4010   2.65e-48 170.0
## 4011   2.89e-47 167.0
## 4012   2.09e-46 165.0
## 4013   9.77e-44 158.0
```

```
## 4014   1.82e-42 154.0
## 4015   1.72e-27 113.0
## 4016   2.17e-51 176.0
## 4017   5.86e-50 172.0
## 4018   2.58e-45 160.0
## 4019   2.20e-51 175.0
## 4020   1.65e-50 172.0
## 4021   1.19e-44 157.0
## 4022   2.26e-40 146.0
## 4023   3.42e-29 116.0
## 4024   1.51e-15  77.8
## 4025   2.23e-51 175.0
## 4026   1.23e-44 157.0
## 4027   3.04e-43 154.0
## 4028   3.29e-10  62.0
## 4029   2.27e-51 174.0
## 4030   1.49e-50 172.0
## 4031   1.08e-44 157.0
## 4032   2.62e-40 145.0
## 4033   2.58e-29 116.0
## 4034   1.16e-15  78.2
## 4035   2.39e-51 180.0
## 4036   3.42e-50 177.0
## 4037   6.80e-48 171.0
## 4038   1.43e-47 170.0
## 4039   5.53e-46 166.0
## 4040   7.69e-45 162.0
## 4041   8.52e-42 154.0
## 4042   1.76e-31 125.0
## 4043   6.46e-31 124.0
## 4044   9.01e-12  67.8
## 4045   2.39e-51 177.0
## 4046   2.56e-47 166.0
## 4047   2.62e-46 163.0
## 4048   2.28e-43 155.0
## 4049   6.14e-34 130.0
## 4050   9.74e-14  73.2
## 4051   1.23e-09  60.5
## 4052   2.39e-51 177.0
## 4053   2.56e-47 166.0
## 4054   2.62e-46 163.0
## 4055   2.28e-43 155.0
## 4056   6.14e-34 130.0
## 4057   9.74e-14  73.2
## 4058   1.23e-09  60.5
## 4059   2.47e-51 177.0
## 4060   8.01e-49 171.0
## 4061   6.19e-48 168.0
## 4062   4.60e-45 160.0
## 4063   2.47e-51 177.0
## 4064   8.01e-49 171.0
## 4065   6.19e-48 168.0
## 4066   4.60e-45 160.0
## 4067   2.48e-51 180.0
```

```
## 4068   3.47e-50 177.0
## 4069   7.79e-48 171.0
## 4070   1.62e-47 170.0
## 4071   6.12e-46 166.0
## 4072   7.83e-45 162.0
## 4073   8.12e-42 154.0
## 4074   4.31e-33 130.0
## 4075   1.78e-31 125.0
## 4076   2.48e-51 176.0
## 4077   2.44e-49 171.0
## 4078   1.53e-46 163.0
## 4079   3.73e-37 138.0
## 4080   9.51e-31 121.0
## 4081   2.51e-51 176.0
## 4082   1.58e-50 173.0
## 4083   7.04e-45 159.0
## 4084   1.66e-40 147.0
## 4085   3.60e-28 114.0
## 4086   5.50e-11  64.7
## 4087   4.90e+00  30.4
## 4088   2.55e-51 185.0
## 4089   3.52e-48 176.0
## 4090   1.86e-47 174.0
## 4091   5.41e-47 172.0
## 4092   1.05e-46 172.0
## 4093   1.80e-45 168.0
## 4094   1.30e-43 163.0
## 4095   2.19e-43 162.0
## 4096   3.20e-43 162.0
## 4097   9.91e-43 160.0
## 4098   1.87e-42 159.0
## 4099   2.00e-42 159.0
## 4100   2.06e-42 159.0
## 4101   2.56e-42 159.0
## 4102   2.61e-42 159.0
## 4103   4.12e-42 158.0
## 4104   6.14e-42 158.0
## 4105   6.94e-42 157.0
## 4106   1.73e-41 156.0
## 4107   4.17e-41 155.0
## 4108   4.25e-41 155.0
## 4109   4.38e-41 155.0
## 4110   5.99e-41 155.0
## 4111   1.18e-40 154.0
## 4112   6.91e-40 152.0
## 4113   7.97e-40 152.0
## 4114   1.11e-39 151.0
## 4115   1.11e-39 151.0
## 4116   2.30e-39 150.0
## 4117   2.68e-39 150.0
## 4118   7.16e-38 146.0
## 4119   2.61e-51 177.0
## 4120   3.26e-51 177.0
## 4121   3.66e-51 177.0
```

```
## 4122   2.75e-50 174.0
## 4123   4.22e-47 166.0
## 4124   5.78e-47 166.0
## 4125   2.77e-51 179.0
## 4126   1.09e-49 174.0
## 4127   2.68e-48 171.0
## 4128   4.85e-48 170.0
## 4129   1.30e-47 169.0
## 4130   1.52e-46 166.0
## 4131   6.79e-44 159.0
## 4132   1.01e-43 159.0
## 4133   3.05e-43 157.0
## 4134   2.84e-51 177.0
## 4135   1.06e-43 157.0
## 4136   4.29e-38 142.0
## 4137   4.61e-38 142.0
## 4138   1.63e-35 135.0
## 4139   2.84e-51 177.0
## 4140   1.06e-43 157.0
## 4141   4.29e-38 142.0
## 4142   4.61e-38 142.0
## 4143   1.63e-35 135.0
## 4144   2.96e-51 173.0
## 4145   2.97e-51 176.0
## 4146   2.70e-47 165.0
## 4147   4.00e-45 159.0
## 4148   2.12e-34 131.0
## 4149   1.76e-29 117.0
## 4150   2.97e-51 176.0
## 4151   2.70e-47 165.0
## 4152   4.00e-45 159.0
## 4153   2.12e-34 131.0
## 4154   1.76e-29 117.0
## 4155   3.01e-51 178.0
## 4156   2.71e-48 170.0
## 4157   1.35e-45 163.0
## 4158   4.93e-45 161.0
## 4159   7.46e-44 158.0
## 4160   1.79e-40 149.0
## 4161   4.18e-29 118.0
## 4162   3.07e-51 178.0
## 4163   6.44e-48 169.0
## 4164   6.26e-44 158.0
## 4165   1.14e-40 149.0
## 4166   2.10e-28 116.0
## 4167   3.33e-51 174.0
## 4168   5.56e-40 145.0
## 4169   3.11e-13  71.2
## 4170   3.33e-51 174.0
## 4171   5.56e-40 145.0
## 4172   3.11e-13  71.2
## 4173   3.38e-51 172.0
## 4174   1.65e-47 163.0
## 4175   1.82e-46 160.0
```

```
## 4176   3.61e-51 175.0
## 4177   7.30e-47 164.0
## 4178   1.87e-38 142.0
## 4179   3.83e-28 114.0
## 4180   5.08e-13  70.9
## 4181   3.79e-51 173.0
## 4182   3.72e-33 125.0
## 4183   3.81e-51 176.0
## 4184   9.34e-49 169.0
## 4185   2.11e-45 160.0
## 4186   2.47e-44 157.0
## 4187   3.59e-42 152.0
## 4188   1.07e-39 145.0
## 4189   1.63e-31 123.0
## 4190   8.70e-01  33.1
## 4191   4.01e-51 183.0
## 4192   6.19e-51 183.0
## 4193   9.56e-51 182.0
## 4194   2.86e-50 181.0
## 4195   7.52e-50 180.0
## 4196   1.06e-48 176.0
## 4197   4.29e-48 175.0
## 4198   1.79e-47 173.0
## 4199   4.77e-47 172.0
## 4200   4.96e-47 172.0
## 4201   7.07e-46 169.0
## 4202   1.11e-45 168.0
## 4203   9.42e-45 165.0
## 4204   9.88e-43 159.0
## 4205   9.37e-42 157.0
## 4206   2.25e-38 147.0
## 4207   2.74e-37 144.0
## 4208   9.17e-37 142.0
## 4209   1.15e-33 133.0
## 4210   4.56e-51 174.0
## 4211   4.83e-49 168.0
## 4212   4.88e-49 168.0
## 4213   3.57e-34 129.0
## 4214   4.70e-51 174.0
## 4215   3.80e-50 172.0
## 4216   4.36e-50 172.0
## 4217   8.36e-36 134.0
## 4218   4.88e-51 177.0
## 4219   1.48e-49 173.0
## 4220   5.52e-47 166.0
## 4221   2.16e-46 165.0
## 4222   8.27e-46 163.0
## 4223   2.25e-42 154.0
## 4224   1.10e-29 119.0
## 4225   5.52e-51 176.0
## 4226   8.69e-51 176.0
## 4227   1.02e-48 170.0
## 4228   8.91e-46 162.0
## 4229   2.84e-45 161.0
```

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## 4230   5.91e-51 179.0
## 4231   5.61e-50 177.0
## 4232   1.26e-48 173.0
## 4233   1.58e-47 170.0
## 4234   1.18e-46 168.0
## 4235   2.54e-46 167.0
## 4236   1.38e-22 100.0
## 4237   4.10e-02  37.4
## 4238   5.93e-51 182.0
## 4239   2.97e-50 180.0
## 4240   2.54e-47 172.0
## 4241   1.61e-46 169.0
## 4242   6.16e-45 165.0
## 4243   1.11e-44 164.0
## 4244   1.96e-42 158.0
## 4245   1.76e-41 155.0
## 4246   7.03e-37 142.0
## 4247   8.17e-36 139.0
## 4248   1.03e-34 136.0
## 4249   1.26e-33 133.0
## 4250   6.10e-51 175.0
## 4251   5.26e-50 173.0
## 4252   5.54e-50 172.0
## 4253   2.36e-48 168.0
## 4254   2.41e-48 168.0
## 4255   1.94e-46 163.0
## 4256   7.08e-41 149.0
## 4257   1.54e-27 112.0
## 4258   3.10e-15  77.4
## 4259   6.10e-51 178.0
## 4260   2.38e-46 166.0
## 4261   1.95e-45 163.0
## 4262   2.96e-42 155.0
## 4263   6.48e-40 149.0
## 4264   5.97e-38 143.0
## 4265   6.73e-35 135.0
## 4266   1.97e-05  47.8
## 4267   6.22e-51 176.0
## 4268   1.31e-49 172.0
## 4269   2.77e-47 166.0
## 4270   2.04e-44 159.0
## 4271   8.81e-21  94.0
## 4272   6.44e-51 174.0
## 4273   1.00e-46 163.0
## 4274   1.03e-43 155.0
## 4275   1.48e-28 114.0
## 4276   3.22e-13  71.2
## 4277   6.82e-51 175.0
## 4278   1.24e-49 172.0
## 4279   1.49e-46 164.0
## 4280   3.11e-43 155.0
## 4281   6.82e-51 175.0
## 4282   1.24e-49 172.0
## 4283   1.49e-46 164.0
```

```
## 4284   3.11e-43 155.0
## 4285   7.03e-51 172.0
## 4286   1.22e-50 172.0
## 4287   9.71e-46 159.0
## 4288   7.27e-51 176.0
## 4289   1.52e-50 175.0
## 4290   4.75e-49 171.0
## 4291   5.87e-49 171.0
## 4292   2.72e-48 169.0
## 4293   1.26e-47 167.0
## 4294   4.61e-33 128.0
## 4295   8.51e-51 171.0
## 4296   1.28e-31 121.0
## 4297   1.60e-21  94.0
## 4298   8.66e-51 174.0
## 4299   3.15e-48 167.0
## 4300   1.32e-45 160.0
## 4301   1.15e-43 155.0
## 4302   3.58e-42 152.0
## 4303   8.87e-51 176.0
## 4304   2.02e-50 174.0
## 4305   1.26e-49 172.0
## 4306   2.17e-47 167.0
## 4307   8.94e-51 175.0
## 4308   3.81e-44 157.0
## 4309   4.28e-40 146.0
## 4310   3.94e-34 130.0
## 4311   7.60e-30 119.0
## 4312   2.45e-06  50.4
## 4313   8.95e-51 173.0
## 4314   2.79e-39 143.0
## 4315   2.08e-30 119.0
## 4316   1.15e-25 106.0
## 4317   1.60e-01  35.0
## 4318   9.33e-51 174.0
## 4319   1.37e-46 163.0
## 4320   9.77e-45 158.0
## 4321   9.22e-35 132.0
## 4322   3.71e-29 117.0
## 4323   9.38e-51 175.0
## 4324   4.98e-49 171.0
## 4325   4.73e-45 160.0
## 4326   2.39e-40 147.0
## 4327   4.35e-31 122.0
## 4328   6.90e+00  30.0
## 4329   9.70e-51 180.0
## 4330   1.68e-46 168.0
## 4331   8.78e-41 152.0
## 4332   1.76e-39 149.0
## 4333   1.15e-38 147.0
## 4334   2.29e-38 145.0
## 4335   4.03e-34 134.0
## 4336   9.78e-51 170.0
## 4337   2.02e-46 159.0
```

```
## 4338   1.64e-40 143.0
## 4339   6.60e-38 136.0
## 4340   9.80e-51 176.0
## 4341   1.32e-48 170.0
## 4342   4.50e-48 169.0
## 4343   6.60e-45 160.0
## 4344   4.68e-44 158.0
## 4345   3.58e-37 140.0
## 4346   1.00e-50 175.0
## 4347   2.62e-50 174.0
## 4348   4.69e-49 171.0
## 4349   4.94e-45 160.0
## 4350   4.59e-41 149.0
## 4351   1.54e-27 113.0
## 4352   1.04e-50 174.0
## 4353   3.54e-46 162.0
## 4354   1.37e-42 153.0
## 4355   7.52e-38 140.0
## 4356   9.18e-28 113.0
## 4357   1.05e-50 174.0
## 4358   2.68e-45 159.0
## 4359   3.27e-32 124.0
## 4360   8.70e+00  29.6
## 4361   1.05e-50 174.0
## 4362   9.37e-47 164.0
## 4363   1.28e-44 158.0
## 4364   2.23e-34 131.0
## 4365   5.13e-29 116.0
## 4366   1.08e-50 183.0
## 4367   1.28e-50 182.0
## 4368   1.24e-49 180.0
## 4369   2.37e-49 179.0
## 4370   2.51e-49 179.0
## 4371   1.81e-48 176.0
## 4372   2.58e-48 176.0
## 4373   3.07e-48 176.0
## 4374   9.48e-48 174.0
## 4375   1.02e-47 174.0
## 4376   1.33e-47 174.0
## 4377   1.75e-47 174.0
## 4378   2.92e-47 173.0
## 4379   4.58e-47 172.0
## 4380   6.79e-47 172.0
## 4381   9.50e-46 169.0
## 4382   1.22e-45 168.0
## 4383   3.01e-42 159.0
## 4384   4.07e-36 140.0
## 4385   2.56e-33 132.0
## 4386   1.19e-50 176.0
## 4387   2.73e-45 162.0
## 4388   2.33e-43 156.0
## 4389   2.31e-42 154.0
## 4390   4.76e-42 153.0
## 4391   2.94e-41 151.0
```

```
## 4392   4.75e-35 134.0
## 4393   2.21e-28 115.0
## 4394   1.23e-50 176.0
## 4395   2.97e-46 164.0
## 4396   2.31e-43 157.0
## 4397   2.07e-42 154.0
## 4398   4.44e-42 153.0
## 4399   2.97e-41 151.0
## 4400   4.25e-35 134.0
## 4401   2.04e-28 116.0
## 4402   1.30e-50 174.0
## 4403   8.12e-49 169.0
## 4404   1.84e-43 155.0
## 4405   5.18e-32 124.0
## 4406   1.32e-50 173.0
## 4407   6.88e-32 124.0
## 4408   1.34e-50 172.0
## 4409   6.66e-48 165.0
## 4410   7.39e-47 162.0
## 4411   3.71e-37 137.0
## 4412   1.73e-20  91.7
## 4413   4.55e-13  70.5
## 4414   1.35e-50 171.0
## 4415   1.80e-48 166.0
## 4416   4.24e-39 141.0
## 4417   4.86e-31 120.0
## 4418   8.49e-16  78.2
## 4419   1.35e-50 175.0
## 4420   2.96e-49 171.0
## 4421   1.26e-47 167.0
## 4422   7.47e-44 157.0
## 4423   1.38e-50 171.0
## 4424   2.03e-43 152.0
## 4425   3.84e-40 143.0
## 4426   1.11e-35 132.0
## 4427   1.42e-50 177.0
## 4428   4.16e-45 162.0
## 4429   2.11e-41 152.0
## 4430   2.43e-40 150.0
## 4431   1.66e-39 147.0
## 4432   3.65e-38 144.0
## 4433   1.07e-32 129.0
## 4434   1.89e-05  47.8
## 4435   1.53e-50 170.0
## 4436   1.73e-45 157.0
## 4437   7.52e-45 155.0
## 4438   9.73e-43 149.0
## 4439   1.50e-32 122.0
## 4440   1.20e+00  32.0
## 4441   1.53e-50 170.0
## 4442   1.73e-45 157.0
## 4443   7.52e-45 155.0
## 4444   9.73e-43 149.0
## 4445   1.50e-32 122.0
```

```
## 4446   1.20e+00  32.0
## 4447   1.59e-50 182.0
## 4448   6.29e-46 169.0
## 4449   4.08e-45 167.0
## 4450   2.03e-43 162.0
## 4451   1.86e-42 159.0
## 4452   8.10e-42 157.0
## 4453   4.97e-41 155.0
## 4454   3.19e-40 152.0
## 4455   8.26e-40 151.0
## 4456   6.09e-39 149.0
## 4457   8.41e-39 148.0
## 4458   8.95e-35 137.0
## 4459   3.69e-34 135.0
## 4460   3.76e-34 135.0
## 4461   1.24e-28 119.0
## 4462   8.70e-27 113.0
## 4463   1.62e-25 109.0
## 4464   1.63e-50 174.0
## 4465   1.60e-47 166.0
## 4466   6.50e-46 161.0
## 4467   6.30e-45 159.0
## 4468   1.92e-44 157.0
## 4469   8.26e-43 153.0
## 4470   6.30e-36 135.0
## 4471   2.61e-35 133.0
## 4472   9.33e-30 118.0
## 4473   3.32e-08  56.2
## 4474   1.76e-50 173.0
## 4475   1.76e-45 160.0
## 4476   1.01e-30 120.0
## 4477   1.92e-50 181.0
## 4478   3.98e-47 172.0
## 4479   2.73e-46 169.0
## 4480   4.61e-46 169.0
## 4481   5.19e-46 169.0
## 4482   8.76e-46 168.0
## 4483   8.19e-45 165.0
## 4484   9.21e-45 165.0
## 4485   2.88e-44 164.0
## 4486   4.39e-43 160.0
## 4487   6.12e-43 160.0
## 4488   1.07e-42 159.0
## 4489   9.22e-42 156.0
## 4490   9.96e-42 156.0
## 4491   6.08e-41 154.0
## 4492   3.32e-37 143.0
## 4493   4.26e-37 143.0
## 4494   2.01e-50 174.0
## 4495   3.69e-47 165.0
## 4496   1.12e-44 159.0
## 4497   1.72e-39 145.0
## 4498   3.75e-35 133.0
## 4499   6.14e-34 130.0
```

```
## 4500   2.30e-32 125.0
## 4501   2.03e-50 176.0
## 4502   1.24e-48 171.0
## 4503   3.60e-47 167.0
## 4504   1.01e-44 160.0
## 4505   1.20e-42 155.0
## 4506   3.92e-42 154.0
## 4507   5.29e-33 129.0
## 4508   9.19e-28 114.0
## 4509   4.05e-27 112.0
## 4510   2.17e-04  44.3
## 4511   2.24e-50 171.0
## 4512   1.37e-48 167.0
## 4513   1.12e-42 151.0
## 4514   8.95e-34 128.0
## 4515   2.32e-50 170.0
## 4516   3.91e-31 119.0
## 4517   1.32e-21  94.0
## 4518   2.40e-50 171.0
## 4519   8.00e-50 170.0
## 4520   2.45e-44 155.0
## 4521   8.54e-30 117.0
## 4522   2.42e-50 173.0
## 4523   1.62e-49 171.0
## 4524   4.11e-47 165.0
## 4525   3.92e-44 157.0
## 4526   6.36e-26 108.0
## 4527   8.00e-03  39.3
## 4528   2.44e-50 173.0
## 4529   1.17e-49 171.0
## 4530   2.39e-44 157.0
## 4531   1.64e-29 117.0
## 4532   2.60e-50 173.0
## 4533   6.84e-46 162.0
## 4534   3.10e-45 160.0
## 4535   4.37e-36 135.0
## 4536   1.65e-30 120.0
## 4537   5.43e-26 108.0
## 4538   2.60e-50 173.0
## 4539   6.84e-46 162.0
## 4540   3.10e-45 160.0
## 4541   4.37e-36 135.0
## 4542   1.65e-30 120.0
## 4543   5.43e-26 108.0
## 4544   2.69e-50 174.0
## 4545   1.43e-49 172.0
## 4546   5.81e-49 171.0
## 4547   6.34e-47 165.0
## 4548   1.20e-46 164.0
## 4549   6.43e-46 162.0
## 4550   1.83e-39 145.0
## 4551   1.04e-16  82.0
## 4552   2.73e-50 174.0
## 4553   3.83e-49 171.0
```

```
## 4554   1.05e-44 159.0
## 4555   3.66e-35 134.0
## 4556   3.62e-29 117.0
## 4557   2.99e-50 171.0
## 4558   5.66e-45 157.0
## 4559   3.00e-50 174.0
## 4560   4.45e-48 168.0
## 4561   1.83e-45 161.0
## 4562   5.78e-38 141.0
## 4563   1.52e-28 115.0
## 4564   3.01e-50 174.0
## 4565   6.49e-50 173.0
## 4566   4.70e-49 171.0
## 4567   1.06e-47 167.0
## 4568   1.67e-47 167.0
## 4569   9.55e-40 146.0
## 4570   9.48e-17  82.0
## 4571   3.18e-50 171.0
## 4572   5.60e-46 159.0
## 4573   9.22e-30 117.0
## 4574   1.94e-15  77.0
## 4575   3.54e-50 171.0
## 4576   1.41e-42 151.0
## 4577   3.72e-50 169.0
## 4578   9.40e-45 155.0
## 4579   4.62e-44 153.0
## 4580   1.42e-39 141.0
## 4581   1.38e-26 107.0
## 4582   3.72e-50 169.0
## 4583   9.40e-45 155.0
## 4584   4.62e-44 153.0
## 4585   1.42e-39 141.0
## 4586   1.38e-26 107.0
## 4587   4.30e-50 173.0
## 4588   1.14e-45 161.0
## 4589   4.80e-45 159.0
## 4590   4.86e-36 135.0
## 4591   4.18e-30 119.0
## 4592   5.60e-26 108.0
## 4593   4.40e-50 174.0
## 4594   3.80e-49 171.0
## 4595   1.19e-43 157.0
## 4596   2.72e-43 155.0
## 4597   6.40e-40 147.0
## 4598   7.32e-36 135.0
## 4599   1.09e-32 127.0
## 4600   4.57e-50 172.0
## 4601   1.08e-49 171.0
## 4602   6.51e-49 169.0
## 4603   1.29e-47 166.0
## 4604   2.44e-47 165.0
## 4605   4.58e-39 143.0
## 4606   1.35e-30 120.0
## 4607   4.58e-50 172.0
```

```
## 4608   3.98e-49 169.0
## 4609   4.13e-44 156.0
## 4610   7.93e-08  54.7
## 4611   4.98e-50 170.0
## 4612   1.59e-47 163.0
## 4613   2.66e-39 142.0
## 4614   5.42e-50 171.0
## 4615   1.12e-44 157.0
## 4616  3.47e-103 309.0
## 4617   3.19e-99 299.0
## 4618   1.44e-96 292.0
## 4619   4.94e-95 288.0
## 4620   1.52e-92 281.0
## 4621   2.26e-71 227.0
## 4622   1.33e-19  90.1
## 4623  8.58e-103 310.0
## 4624   1.48e-94 289.0
## 4625   5.92e-93 285.0
## 4626   2.26e-92 283.0
## 4627   6.64e-90 277.0
## 4628   9.16e-89 274.0
## 4629   6.98e-66 215.0
## 4630   1.15e-13  72.8
## 4631  1.00e-102 313.0
## 4632  9.53e-101 308.0
## 4633  2.44e-100 306.0
## 4634   2.79e-99 304.0
## 4635   2.01e-98 301.0
## 4636   3.24e-98 301.0
## 4637   6.11e-96 295.0
## 4638   3.68e-90 280.0
## 4639   1.09e-88 276.0
## 4640   2.72e-86 270.0
## 4641   1.31e-69 227.0
## 4642   1.25e-15  79.3
## 4643  1.98e-102 309.0
## 4644   1.75e-99 301.0
## 4645   9.47e-99 300.0
## 4646   1.14e-98 300.0
## 4647   1.60e-97 296.0
## 4648   2.68e-87 270.0
## 4649   1.15e-50 175.0
## 4650   1.49e-28 116.0
## 4651  1.01e-101 309.0
## 4652   2.13e-98 301.0
## 4653   5.90e-96 295.0
## 4654   2.82e-95 293.0
## 4655   3.11e-93 288.0
## 4656   1.67e-92 286.0
## 4657   4.30e-86 269.0
## 4658   3.99e-81 256.0
## 4659  1.94e-101 309.0
## 4660   3.83e-97 298.0
## 4661   2.37e-96 296.0
```

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## 4662   2.89e-95 293.0
## 4663   1.03e-91 284.0
## 4664   2.75e-88 275.0
## 4665   6.85e-87 271.0
## 4666  2.54e-101 308.0
## 4667   2.56e-98 300.0
## 4668   7.17e-96 294.0
## 4669   3.39e-95 293.0
## 4670   3.74e-93 287.0
## 4671   2.01e-92 285.0
## 4672   4.95e-86 269.0
## 4673   5.15e-82 259.0
## 4674  3.12e-101 304.0
## 4675  7.04e-101 303.0
## 4676   4.38e-97 294.0
## 4677   2.61e-92 281.0
## 4678   2.76e-76 240.0
## 4679   5.96e-50 172.0
## 4680  1.95e-100 303.0
## 4681  2.27e-100 303.0
## 4682   2.23e-98 298.0
## 4683   1.19e-91 281.0
## 4684   3.18e-86 267.0
## 4685   1.10e-57 193.0
## 4686  3.15e-100 303.0
## 4687   3.16e-98 298.0
## 4688   1.63e-91 281.0
## 4689   1.52e-88 273.0
## 4690   3.26e-88 272.0
## 4691   9.11e-88 271.0
## 4692   1.34e-62 206.0
## 4693   3.43e-52 179.0
## 4694  4.48e-100 307.0
## 4695   2.47e-96 297.0
## 4696   8.89e-96 296.0
## 4697   1.75e-95 295.0
## 4698   2.06e-95 295.0
## 4699   6.64e-95 293.0
## 4700   3.09e-94 292.0
## 4701   1.45e-93 290.0
## 4702   7.86e-93 288.0
## 4703   1.50e-92 288.0
## 4704   1.99e-91 285.0
## 4705   7.96e-89 278.0
## 4706   6.69e-82 260.0
## 4707   4.70e-26 110.0
## 4708  4.65e-100 303.0
## 4709  9.51e-100 302.0
## 4710   6.00e-99 300.0
## 4711   7.69e-99 300.0
## 4712   1.08e-97 297.0
## 4713   1.31e-87 271.0
## 4714   2.37e-83 260.0
## 4715  5.27e-100 302.0
```

```
## 4716   1.20e-92 283.0
## 4717   7.39e-91 278.0
## 4718   3.89e-72 230.0
## 4719  5.85e-100 303.0
## 4720   5.11e-99 300.0
## 4721   1.05e-97 297.0
## 4722   1.21e-96 294.0
## 4723   8.77e-96 292.0
## 4724   7.48e-94 287.0
## 4725   1.92e-92 283.0
## 4726   1.59e-82 258.0
## 4727   8.96e-69 223.0
## 4728   3.96e-62 205.0
## 4729  7.75e-100 303.0
## 4730  9.83e-100 303.0
## 4731   2.10e-96 295.0
## 4732   7.20e-96 293.0
## 4733   9.96e-96 293.0
## 4734   6.29e-93 286.0
## 4735   1.81e-86 269.0
## 4736   3.29e-60 201.0
## 4737  8.86e-100 305.0
## 4738   1.29e-93 289.0
## 4739   3.70e-93 288.0
## 4740   5.02e-90 280.0
## 4741   8.97e-90 279.0
## 4742   9.98e-86 269.0
## 4743   5.87e-85 267.0
## 4744   8.73e-85 266.0
## 4745   3.52e-56 192.0
## 4746   1.60e-99 300.0
## 4747   1.86e-95 290.0
## 4748   3.18e-86 266.0
## 4749   6.22e-85 263.0
## 4750   7.98e-74 234.0
## 4751   2.71e-99 298.0
## 4752   2.18e-96 291.0
## 4753   2.56e-94 286.0
## 4754   2.81e-99 302.0
## 4755   1.91e-96 295.0
## 4756   5.93e-96 293.0
## 4757   9.33e-96 293.0
## 4758   2.78e-94 289.0
## 4759   5.71e-93 286.0
## 4760   1.51e-86 270.0
## 4761   2.04e-56 191.0
## 4762   7.62e-99 301.0
## 4763   6.29e-97 296.0
## 4764   2.92e-94 289.0
## 4765   7.63e-94 288.0
## 4766   2.17e-93 287.0
## 4767   2.59e-93 286.0
## 4768   1.02e-89 277.0
## 4769   1.23e-98 296.0
```

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## 4770   1.39e-92 281.0
## 4771   6.32e-90 274.0
## 4772   1.03e-85 263.0
## 4773   2.89e-82 254.0
## 4774   1.49e-98 297.0
## 4775   2.51e-89 273.0
## 4776   3.47e-34 130.0
## 4777   2.23e-32 125.0
## 4778   1.65e-98 303.0
## 4779   9.67e-98 301.0
## 4780   7.09e-96 296.0
## 4781   2.75e-95 295.0
## 4782   1.20e-94 293.0
## 4783   1.97e-94 292.0
## 4784   1.37e-92 288.0
## 4785   7.35e-92 286.0
## 4786   1.68e-85 269.0
## 4787   3.94e-58 198.0
## 4788   1.78e-98 302.0
## 4789   1.91e-97 299.0
## 4790   2.63e-95 293.0
## 4791   2.08e-94 291.0
## 4792   7.34e-94 290.0
## 4793   1.45e-93 289.0
## 4794   2.98e-93 288.0
## 4795   2.92e-92 286.0
## 4796   6.82e-90 280.0
## 4797   1.83e-98 302.0
## 4798   1.20e-95 295.0
## 4799   9.71e-93 287.0
## 4800   5.64e-90 280.0
## 4801   1.08e-88 277.0
## 4802   1.84e-84 266.0
## 4803   2.31e-82 261.0
## 4804   2.41e-77 248.0
## 4805   1.18e-62 209.0
## 4806   1.85e-98 303.0
## 4807   1.18e-97 301.0
## 4808   3.54e-95 294.0
## 4809   1.46e-94 293.0
## 4810   1.69e-92 287.0
## 4811   1.77e-92 287.0
## 4812   5.70e-92 286.0
## 4813   8.67e-92 286.0
## 4814   2.13e-85 269.0
## 4815   2.77e-55 190.0
## 4816   2.31e-98 303.0
## 4817   1.33e-97 301.0
## 4818   4.46e-95 295.0
## 4819   9.07e-95 294.0
## 4820   1.75e-94 293.0
## 4821   4.79e-94 292.0
## 4822   1.96e-92 288.0
## 4823   1.02e-91 286.0
```

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## 4824   4.70e-89 279.0
## 4825   2.14e-85 270.0
## 4826   7.55e-55 189.0
## 4827   2.44e-98 300.0
## 4828   9.02e-98 299.0
## 4829   1.56e-96 296.0
## 4830   1.54e-95 293.0
## 4831   1.59e-95 293.0
## 4832   6.57e-94 289.0
## 4833   1.63e-93 288.0
## 4834   9.88e-92 283.0
## 4835   7.70e-88 273.0
## 4836   2.45e-98 298.0
## 4837   3.58e-95 290.0
## 4838   2.05e-93 286.0
## 4839   1.25e-89 276.0
## 4840   4.56e-87 270.0
## 4841   2.49e-98 300.0
## 4842   5.57e-97 297.0
## 4843   7.43e-96 294.0
## 4844   3.30e-95 293.0
## 4845   3.48e-93 287.0
## 4846   2.00e-92 285.0
## 4847   5.14e-86 269.0
## 4848   8.56e-78 248.0
## 4849   3.60e-98 300.0
## 4850   4.52e-98 300.0
## 4851   2.54e-97 298.0
## 4852   7.96e-96 294.0
## 4853   1.99e-95 293.0
## 4854   6.12e-95 292.0
## 4855   2.26e-94 290.0
## 4856   8.79e-94 289.0
## 4857   3.25e-89 277.0
## 4858   1.70e-17  84.7
## 4859   3.83e-98 301.0
## 4860   2.08e-97 299.0
## 4861   2.75e-95 293.0
## 4862   4.71e-95 293.0
## 4863   2.20e-94 291.0
## 4864   3.10e-94 291.0
## 4865   8.63e-94 290.0
## 4866   2.62e-93 288.0
## 4867   3.28e-93 288.0
## 4868   7.75e-89 277.0
## 4869   4.66e-98 301.0
## 4870   1.19e-97 300.0
## 4871   3.01e-95 294.0
## 4872   9.83e-95 293.0
## 4873   1.53e-94 292.0
## 4874   3.25e-94 291.0
## 4875   5.25e-92 286.0
## 4876   2.65e-90 281.0
## 4877   1.45e-83 264.0
```

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## 4878   8.44e-98 306.0
## 4879   2.06e-96 302.0
## 4880   4.39e-96 301.0
## 4881   4.83e-96 301.0
## 4882   3.66e-94 296.0
## 4883   7.54e-94 296.0
## 4884   2.21e-93 294.0
## 4885   2.70e-93 294.0
## 4886   1.70e-92 292.0
## 4887   4.51e-92 291.0
## 4888   1.20e-91 290.0
## 4889   4.10e-91 288.0
## 4890   4.00e-89 283.0
## 4891   1.90e-88 281.0
## 4892   1.04e-97 293.0
## 4893   1.69e-81 251.0
## 4894   1.06e-97 297.0
## 4895   3.86e-95 291.0
## 4896   4.50e-93 285.0
## 4897   4.22e-92 283.0
## 4898   1.61e-91 281.0
## 4899   3.14e-83 260.0
## 4900   1.62e-97 296.0
## 4901   4.43e-96 293.0
## 4902   8.07e-93 285.0
## 4903   8.34e-92 282.0
## 4904   1.79e-97 307.0
## 4905   5.34e-94 298.0
## 4906   7.46e-88 282.0
## 4907   1.11e-87 281.0
## 4908   2.07e-87 281.0
## 4909   3.15e-87 280.0
## 4910   9.58e-85 273.0
## 4911   1.12e-84 273.0
## 4912   2.97e-84 272.0
## 4913   1.12e-80 263.0
## 4914   8.11e-78 255.0
## 4915   1.51e-76 252.0
## 4916   3.61e-16  81.3
## 4917   1.98e-97 297.0
## 4918   2.92e-97 297.0
## 4919   6.44e-97 296.0
## 4920   1.37e-96 295.0
## 4921   3.87e-96 294.0
## 4922   6.65e-96 293.0
## 4923   4.12e-94 289.0
## 4924   7.00e-94 288.0
## 4925   5.02e-89 276.0
## 4926   1.60e-17  84.7
## 4927   2.21e-97 296.0
## 4928   7.12e-97 295.0
## 4929   4.94e-96 293.0
## 4930   1.77e-95 291.0
## 4931   6.92e-95 290.0
```

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## 4932   4.96e-93 285.0
## 4933   3.69e-86 268.0
## 4934   2.85e-97 291.0
## 4935   4.40e-94 283.0
## 4936   1.85e-86 264.0
## 4937   3.18e-86 263.0
## 4938   2.87e-97 295.0
## 4939   2.18e-96 293.0
## 4940   3.58e-96 293.0
## 4941   7.46e-94 286.0
## 4942   5.01e-93 285.0
## 4943   1.01e-86 268.0
## 4944   7.65e-86 266.0
## 4945   5.01e-40 147.0
## 4946   3.80e-97 295.0
## 4947   1.77e-96 293.0
## 4948   2.85e-96 293.0
## 4949   2.30e-95 290.0
## 4950   2.66e-94 288.0
## 4951   5.10e-94 287.0
## 4952   1.28e-87 270.0
## 4953   6.17e-86 266.0
## 4954   4.89e-97 292.0
## 4955   7.56e-96 289.0
## 4956   5.39e-87 266.0
## 4957   4.66e-83 256.0
## 4958   3.30e-68 218.0
## 4959   2.43e-24 102.0
## 4960   7.62e-97 300.0
## 4961   1.30e-94 294.0
## 4962   5.70e-94 293.0
## 4963   9.23e-94 292.0
## 4964   1.93e-68 226.0
## 4965   5.31e-65 217.0
## 4966   2.87e-64 215.0
## 4967   4.16e-59 201.0
## 4968   3.33e-47 169.0
## 4969   8.96e-97 295.0
## 4970   2.70e-94 289.0
## 4971   5.33e-92 283.0
## 4972   5.69e-92 283.0
## 4973   6.39e-91 280.0
## 4974   1.30e-90 280.0
## 4975   4.00e-81 255.0
## 4976   7.10e-58 195.0
## 4977   9.14e-97 295.0
## 4978   4.39e-96 293.0
## 4979   6.84e-96 293.0
## 4980   8.98e-94 287.0
## 4981   1.18e-93 287.0
## 4982   1.31e-93 287.0
## 4983   2.76e-91 281.0
## 4984   1.19e-85 266.0
## 4985   1.58e-85 266.0
```

```
## 4986   9.56e-97 290.0
## 4987   9.69e-96 288.0
## 4988   2.35e-82 253.0
## 4989   4.38e-59 194.0
## 4990   9.71e-97 294.0
## 4991   9.55e-91 279.0
## 4992   6.22e-83 259.0
## 4993   9.71e-97 294.0
## 4994   9.55e-91 279.0
## 4995   6.22e-83 259.0
## 4996   9.71e-97 294.0
## 4997   9.55e-91 279.0
## 4998   6.22e-83 259.0
## 4999   9.71e-97 294.0
## 5000   9.55e-91 279.0
## 5001   6.22e-83 259.0
## 5002   9.71e-97 294.0
## 5003   9.55e-91 279.0
## 5004   6.22e-83 259.0
## 5005   1.02e-96 290.0
## 5006   3.14e-94 284.0
## 5007   1.62e-84 259.0
## 5008   2.95e-83 256.0
## 5009   6.84e-59 193.0
## 5010   1.06e-96 295.0
## 5011   1.19e-95 292.0
## 5012   4.21e-95 290.0
## 5013   6.28e-95 290.0
## 5014   1.56e-94 289.0
## 5015   1.10e-93 287.0
## 5016   1.14e-92 284.0
## 5017   3.03e-86 268.0
## 5018   8.00e-86 267.0
## 5019   5.49e-64 210.0
## 5020   1.11e-96 294.0
## 5021   1.47e-91 281.0
## 5022   3.07e-82 257.0
## 5023   1.11e-96 294.0
## 5024   1.47e-91 281.0
## 5025   3.07e-82 257.0
## 5026   1.11e-96 294.0
## 5027   1.47e-91 281.0
## 5028   3.07e-82 257.0
## 5029   1.11e-96 294.0
## 5030   1.47e-91 281.0
## 5031   3.07e-82 257.0
## 5032   1.11e-96 294.0
## 5033   1.47e-91 281.0
## 5034   3.07e-82 257.0
## 5035   1.11e-96 294.0
## 5036   1.47e-91 281.0
## 5037   3.07e-82 257.0
## 5038   1.11e-96 294.0
## 5039   1.47e-91 281.0
```

```
## 5040   3.07e-82 257.0
## 5041   1.11e-96 294.0
## 5042   1.47e-91 281.0
## 5043   3.07e-82 257.0
## 5044   1.11e-96 294.0
## 5045   1.47e-91 281.0
## 5046   3.07e-82 257.0
## 5047   1.11e-96 294.0
## 5048   1.47e-91 281.0
## 5049   3.07e-82 257.0
## 5050   1.11e-96 294.0
## 5051   1.47e-91 281.0
## 5052   3.07e-82 257.0
## 5053   1.11e-96 294.0
## 5054   1.47e-91 281.0
## 5055   3.07e-82 257.0
## 5056   1.11e-96 294.0
## 5057   1.47e-91 281.0
## 5058   3.07e-82 257.0
## 5059   1.11e-96 294.0
## 5060   1.47e-91 281.0
## 5061   3.07e-82 257.0
## 5062   1.38e-96 293.0
## 5063   1.66e-91 280.0
## 5064   3.24e-82 256.0
## 5065   1.38e-96 293.0
## 5066   1.66e-91 280.0
## 5067   3.24e-82 256.0
## 5068   1.38e-96 293.0
## 5069   1.66e-91 280.0
## 5070   3.24e-82 256.0
## 5071   1.38e-96 293.0
## 5072   1.66e-91 280.0
## 5073   3.24e-82 256.0
## 5074   1.38e-96 293.0
## 5075   1.66e-91 280.0
## 5076   3.24e-82 256.0
## 5077   1.38e-96 293.0
## 5078   1.66e-91 280.0
## 5079   3.24e-82 256.0
## 5080   1.38e-96 293.0
## 5081   1.66e-91 280.0
## 5082   3.24e-82 256.0
## 5083   1.38e-96 293.0
## 5084   1.66e-91 280.0
## 5085   3.24e-82 256.0
## 5086   1.38e-96 293.0
## 5087   1.66e-91 280.0
## 5088   3.24e-82 256.0
## 5089   1.38e-96 293.0
## 5090   1.66e-91 280.0
## 5091   3.24e-82 256.0
## 5092   1.38e-96 293.0
## 5093   1.66e-91 280.0
```

```
## 5094   3.24e-82 256.0
## 5095   1.38e-96 293.0
## 5096   1.66e-91 280.0
## 5097   3.24e-82 256.0
## 5098   1.65e-96 294.0
## 5099   5.72e-84 262.0
## 5100   1.11e-71 230.0
## 5101   1.38e-59 199.0
## 5102   1.81e-96 294.0
## 5103   1.81e-90 279.0
## 5104   1.28e-82 259.0
## 5105   2.77e-96 298.0
## 5106   3.72e-95 295.0
## 5107   5.12e-93 290.0
## 5108   7.06e-93 290.0
## 5109   3.14e-90 283.0
## 5110   5.59e-90 282.0
## 5111   1.46e-83 265.0
## 5112   2.19e-82 262.0
## 5113   5.49e-79 253.0
## 5114   1.09e-47 171.0
## 5115   3.46e-96 292.0
## 5116   2.97e-90 276.0
## 5117   1.46e-87 270.0
## 5118   1.51e-86 267.0
## 5119   2.73e-65 213.0
## 5120   1.64e-07  53.9
## 5121   3.52e-96 301.0
## 5122   2.08e-94 296.0
## 5123   4.14e-93 293.0
## 5124   9.54e-92 290.0
## 5125   2.82e-91 288.0
## 5126   6.19e-91 287.0
## 5127   8.89e-91 287.0
## 5128   1.02e-87 279.0
## 5129   1.60e-85 273.0
## 5130   8.80e-85 271.0
## 5131   8.20e-81 261.0
## 5132   7.08e-47 170.0
## 5133   3.63e-96 295.0
## 5134   3.33e-94 290.0
## 5135   1.97e-91 283.0
## 5136   2.01e-91 283.0
## 5137   6.88e-90 279.0
## 5138   2.06e-89 278.0
## 5139   1.19e-88 276.0
## 5140   3.57e-86 270.0
## 5141   5.17e-84 264.0
## 5142   2.26e-17  84.3
## 5143   3.66e-96 296.0
## 5144   1.27e-95 295.0
## 5145   3.92e-95 293.0
## 5146   3.92e-95 293.0
## 5147   4.33e-94 290.0
```

```
## 5148   4.25e-93 288.0
## 5149   9.95e-92 285.0
## 5150   2.11e-91 283.0
## 5151   3.77e-89 278.0
## 5152   1.93e-85 268.0
## 5153   3.72e-96 298.0
## 5154   6.26e-95 295.0
## 5155   1.82e-93 291.0
## 5156   7.83e-93 289.0
## 5157   7.95e-91 284.0
## 5158   1.74e-90 283.0
## 5159   2.50e-88 278.0
## 5160   6.76e-88 276.0
## 5161   1.34e-83 265.0
## 5162   9.28e-82 260.0
## 5163   9.76e-07  52.0
## 5164   4.64e-96 293.0
## 5165   6.90e-93 285.0
## 5166   6.18e-92 283.0
## 5167   1.69e-91 282.0
## 5168   3.16e-89 276.0
## 5169   3.44e-83 261.0
## 5170   4.83e-96 288.0
## 5171   4.49e-95 286.0
## 5172   2.11e-88 269.0
## 5173   1.54e-79 246.0
## 5174   5.83e-96 306.0
## 5175   2.24e-92 296.0
## 5176   1.20e-91 295.0
## 5177   2.69e-90 291.0
## 5178   1.01e-89 290.0
## 5179   2.04e-89 288.0
## 5180   2.57e-89 288.0
## 5181   3.69e-89 288.0
## 5182   1.22e-88 286.0
## 5183   1.35e-88 286.0
## 5184   2.32e-88 286.0
## 5185   4.02e-88 285.0
## 5186   2.98e-87 283.0
## 5187   3.86e-87 283.0
## 5188   4.74e-87 282.0
## 5189   5.00e-87 282.0
## 5190   6.27e-87 282.0
## 5191   1.17e-86 281.0
## 5192   1.66e-86 281.0
## 5193   4.68e-86 280.0
## 5194   1.72e-85 278.0
## 5195   2.41e-84 275.0
## 5196   4.59e-82 269.0
## 5197   1.53e-81 268.0
## 5198   1.94e-79 262.0
## 5199   1.56e-78 259.0
## 5200   6.28e-96 291.0
## 5201   4.52e-77 242.0
```

```
## 5202   8.46e-35 132.0
## 5203   6.96e-96 291.0
## 5204   3.57e-93 285.0
## 5205   3.46e-92 282.0
## 5206   1.76e-88 273.0
## 5207   8.64e-96 305.0
## 5208   8.82e-96 305.0
## 5209   1.62e-95 304.0
## 5210   6.80e-95 303.0
## 5211   1.70e-93 299.0
## 5212   2.12e-93 299.0
## 5213   1.10e-92 297.0
## 5214   1.13e-92 297.0
## 5215   1.34e-92 296.0
## 5216   1.35e-92 296.0
## 5217   1.25e-90 291.0
## 5218   1.43e-89 288.0
## 5219   1.09e-88 286.0
## 5220   3.16e-88 285.0
## 5221   2.69e-83 272.0
## 5222   7.87e-80 263.0
## 5223   4.31e-79 260.0
## 5224   9.29e-67 227.0
## 5225   2.50e-38 147.0
## 5226   8.82e-96 295.0
## 5227   3.51e-95 293.0
## 5228   1.04e-94 292.0
## 5229   1.77e-94 291.0
## 5230   1.20e-91 284.0
## 5231   1.41e-91 284.0
## 5232   1.82e-88 276.0
## 5233   5.66e-86 269.0
## 5234   2.00e-82 260.0
## 5235   2.01e-72 234.0
## 5236   1.49e-95 289.0
## 5237   1.51e-90 276.0
## 5238   1.13e-83 259.0
## 5239   4.41e-80 249.0
## 5240   1.59e-95 288.0
## 5241   4.00e-86 264.0
## 5242   1.75e-37 138.0
## 5243   2.18e-95 299.0
## 5244   3.03e-94 296.0
## 5245   1.25e-93 294.0
## 5246   5.73e-93 292.0
## 5247   7.24e-93 292.0
## 5248   3.15e-92 290.0
## 5249   5.77e-92 290.0
## 5250   2.91e-91 288.0
## 5251   7.33e-91 287.0
## 5252   3.11e-90 285.0
## 5253   1.88e-88 281.0
## 5254   1.12e-87 279.0
## 5255   8.48e-86 274.0
```

```
## 5256   1.12e-83 268.0
## 5257   2.31e-80 259.0
## 5258   8.47e-74 242.0
## 5259   5.00e-03  40.4
## 5260   2.96e-95 288.0
## 5261   1.45e-92 281.0
## 5262   1.75e-63 206.0
## 5263   3.63e-95 296.0
## 5264   1.61e-94 294.0
## 5265   2.90e-94 293.0
## 5266   7.07e-94 293.0
## 5267   3.96e-93 291.0
## 5268   1.34e-92 289.0
## 5269   1.36e-92 289.0
## 5270   2.11e-92 289.0
## 5271   1.19e-91 287.0
## 5272   1.51e-91 286.0
## 5273   2.32e-91 286.0
## 5274   6.05e-90 282.0
## 5275   3.12e-88 278.0
## 5276   2.03e-71 234.0
## 5277   7.24e-68 225.0
## 5278   1.19e-38 146.0
## 5279   4.85e-95 288.0
## 5280   1.25e-91 280.0
## 5281   1.29e-91 280.0
## 5282   1.93e-88 271.0
## 5283   1.78e-81 254.0
## 5284   4.04e-72 230.0
## 5285   1.52e-45 160.0
## 5286   6.26e-95 295.0
## 5287   3.20e-94 293.0
## 5288   3.67e-92 287.0
## 5289   1.69e-90 283.0
## 5290   1.29e-89 281.0
## 5291   5.43e-89 279.0
## 5292   1.80e-88 278.0
## 5293   5.78e-88 276.0
## 5294   6.17e-88 276.0
## 5295   2.28e-87 275.0
## 5296   4.65e-86 271.0
## 5297   5.18e-76 245.0
## 5298   6.14e-16  80.1
## 5299   5.29e-15  77.4
## 5300   7.56e-95 297.0
## 5301   3.12e-93 293.0
## 5302   7.24e-93 292.0
## 5303   7.83e-91 287.0
## 5304   3.95e-90 285.0
## 5305   1.11e-89 284.0
## 5306   1.21e-89 284.0
## 5307   1.73e-89 283.0
## 5308   2.82e-89 283.0
## 5309   1.87e-88 280.0
```

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## 5310   4.47e-88 280.0
## 5311   1.84e-87 278.0
## 5312   1.05e-86 276.0
## 5313   6.85e-86 274.0
## 5314   1.04e-84 271.0
## 5315   8.86e-95 301.0
## 5316   7.34e-94 299.0
## 5317   6.96e-93 296.0
## 5318   2.43e-92 295.0
## 5319   7.01e-92 293.0
## 5320   1.44e-90 290.0
## 5321   2.31e-90 290.0
## 5322   6.58e-90 288.0
## 5323   1.30e-89 288.0
## 5324   3.07e-89 286.0
## 5325   1.24e-88 285.0
## 5326   1.90e-87 282.0
## 5327   2.90e-86 278.0
## 5328   1.29e-85 277.0
## 5329   1.48e-85 277.0
## 5330   1.05e-81 266.0
## 5331   1.35e-80 263.0
## 5332   2.25e-80 263.0
## 5333   2.42e-80 263.0
## 5334   3.21e-51 183.0
## 5335   9.96e-95 296.0
## 5336   2.35e-91 287.0
## 5337   4.95e-91 286.0
## 5338   7.05e-90 283.0
## 5339   5.23e-88 278.0
## 5340   3.58e-86 274.0
## 5341   3.60e-85 271.0
## 5342   6.95e-85 270.0
## 5343   1.32e-82 264.0
## 5344   3.97e-65 218.0
## 5345   7.00e-03  39.7
## 5346   1.09e-94 287.0
## 5347   3.26e-94 286.0
## 5348   9.22e-94 285.0
## 5349   9.31e-87 267.0
## 5350   6.05e-86 265.0
## 5351   1.11e-94 288.0
## 5352   6.35e-94 286.0
## 5353   3.94e-91 279.0
## 5354   3.55e-89 274.0
## 5355   4.50e-88 271.0
## 5356   2.65e-87 270.0
## 5357   2.52e-79 249.0
## 5358   3.86e-34 130.0
## 5359   1.16e-94 288.0
## 5360   7.54e-94 286.0
## 5361   2.49e-91 280.0
## 5362   1.84e-90 278.0
## 5363   2.09e-85 265.0
```

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## 5364   2.51e-22  98.2
## 5365   1.21e-94 286.0
## 5366   1.17e-84 260.0
## 5367   2.51e-65 211.0
## 5368   2.63e-63 205.0
## 5369   1.00e-21  95.5
## 5370   1.61e-94 286.0
## 5371   8.03e-91 277.0
## 5372   1.01e-84 261.0
## 5373   7.14e-46 161.0
## 5374   1.85e-94 290.0
## 5375   1.29e-92 286.0
## 5376   2.39e-90 280.0
## 5377   3.77e-90 280.0
## 5378   7.86e-88 273.0
## 5379   1.29e-86 270.0
## 5380   5.75e-86 269.0
## 5381   9.90e-84 263.0
## 5382   2.41e-76 244.0
## 5383   4.88e-73 235.0
## 5384   2.16e-94 298.0
## 5385   1.23e-93 296.0
## 5386   2.90e-93 295.0
## 5387   1.37e-92 293.0
## 5388   2.51e-92 293.0
## 5389   3.79e-92 292.0
## 5390   4.44e-92 292.0
## 5391   1.25e-91 291.0
## 5392   3.72e-91 290.0
## 5393   2.34e-90 288.0
## 5394   2.39e-90 288.0
## 5395   2.57e-90 288.0
## 5396   3.46e-90 287.0
## 5397   4.80e-90 287.0
## 5398   6.12e-90 286.0
## 5399   9.13e-90 286.0
## 5400   1.89e-89 285.0
## 5401   2.31e-89 285.0
## 5402   9.57e-86 275.0
## 5403   2.28e-94 288.0
## 5404   2.11e-93 286.0
## 5405   3.83e-93 285.0
## 5406   1.86e-91 281.0
## 5407   2.09e-90 278.0
## 5408   3.43e-88 273.0
## 5409   3.76e-87 270.0
## 5410   2.40e-94 286.0
## 5411   9.68e-93 283.0
## 5412   1.67e-91 279.0
## 5413   1.41e-57 192.0
## 5414   2.51e-94 288.0
## 5415   5.01e-93 285.0
## 5416   6.22e-92 282.0
## 5417   3.74e-91 280.0
```

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## 5418   2.34e-89 276.0
## 5419   9.43e-76 241.0
## 5420   1.20e-63 209.0
## 5421   1.13e-36 138.0
## 5422   1.10e+00  32.7
## 5423   2.67e-94 288.0
## 5424   3.55e-92 282.0
## 5425   3.63e-91 280.0
## 5426   7.49e-91 279.0
## 5427   7.74e-91 279.0
## 5428   5.59e-88 271.0
## 5429   3.14e-78 246.0
## 5430   6.33e-66 215.0
## 5431   3.60e-94 300.0
## 5432   1.11e-93 298.0
## 5433   4.87e-92 294.0
## 5434   6.03e-88 283.0
## 5435   1.26e-86 280.0
## 5436   4.29e-86 278.0
## 5437   4.66e-86 278.0
## 5438   3.84e-85 276.0
## 5439   6.82e-85 275.0
## 5440   2.34e-84 273.0
## 5441   3.81e-84 273.0
## 5442   3.23e-83 270.0
## 5443   1.28e-78 258.0
## 5444   1.40e-73 244.0
## 5445   4.49e-94 283.0
## 5446   1.61e-91 277.0
## 5447   2.06e-86 264.0
## 5448   1.55e-30 119.0
## 5449   4.54e-94 285.0
## 5450   8.20e-86 264.0
## 5451   1.78e-81 253.0
## 5452   3.89e-40 145.0
## 5453   5.12e-94 285.0
## 5454   4.09e-90 276.0
## 5455   5.72e-90 275.0
## 5456   6.68e-85 262.0
## 5457   4.95e-68 219.0
## 5458   1.91e-45 160.0
## 5459   4.25e-31 122.0
## 5460   5.65e-94 283.0
## 5461   3.48e-91 276.0
## 5462   3.25e-87 266.0
## 5463   5.94e-94 284.0
## 5464   6.62e-93 281.0
## 5465   3.38e-92 279.0
## 5466   7.52e-84 258.0
## 5467   1.35e-83 257.0
## 5468   3.61e-69 220.0
## 5469   3.03e-18  85.5
## 5470   1.56e-13  71.6
## 5471   6.03e-94 287.0
```

```
## 5472   7.95e-90 276.0
## 5473   1.71e-84 263.0
## 5474   6.51e-94 308.0
## 5475   9.03e-94 307.0
## 5476   2.17e-93 306.0
## 5477   4.02e-92 302.0
## 5478   1.55e-91 301.0
## 5479   2.41e-91 300.0
## 5480   3.22e-91 300.0
## 5481   9.20e-91 298.0
## 5482   1.26e-90 298.0
## 5483   1.81e-90 298.0
## 5484   1.88e-90 298.0
## 5485   1.99e-90 298.0
## 5486   2.68e-90 297.0
## 5487   2.73e-90 297.0
## 5488   7.16e-90 296.0
## 5489   1.00e-89 295.0
## 5490   1.28e-89 295.0
## 5491   1.86e-89 295.0
## 5492   2.34e-89 295.0
## 5493   3.41e-89 294.0
## 5494   3.75e-89 294.0
## 5495   4.64e-89 293.0
## 5496   8.43e-89 293.0
## 5497   9.02e-89 293.0
## 5498   1.11e-88 292.0
## 5499   1.26e-88 292.0
## 5500   1.84e-88 292.0
## 5501   4.01e-88 291.0
## 5502   5.01e-88 291.0
## 5503   7.22e-88 290.0
## 5504   1.77e-87 289.0
## 5505   2.43e-87 288.0
## 5506   2.62e-87 288.0
## 5507   5.84e-87 288.0
## 5508   1.05e-86 287.0
## 5509   1.19e-86 286.0
## 5510   1.36e-86 286.0
## 5511   1.37e-86 286.0
## 5512   1.39e-86 286.0
## 5513   5.04e-86 285.0
## 5514   9.62e-86 284.0
## 5515   1.20e-85 284.0
## 5516   1.54e-85 283.0
## 5517   1.71e-85 283.0
## 5518   1.92e-85 283.0
## 5519   2.57e-85 283.0
## 5520   2.85e-85 283.0
## 5521   3.39e-85 282.0
## 5522   4.99e-85 282.0
## 5523   7.48e-85 281.0
## 5524   2.00e-84 280.0
## 5525   4.84e-84 279.0
```

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## 5526   6.78e-84 279.0
## 5527   9.13e-84 278.0
## 5528   2.15e-83 277.0
## 5529   2.74e-83 277.0
## 5530   3.55e-83 276.0
## 5531   5.85e-83 276.0
## 5532   7.59e-83 276.0
## 5533   8.52e-83 276.0
## 5534   1.05e-82 275.0
## 5535   1.66e-82 275.0
## 5536   3.25e-82 274.0
## 5537   3.41e-82 274.0
## 5538   3.68e-82 274.0
## 5539   5.15e-82 273.0
## 5540   2.06e-81 271.0
## 5541   2.78e-81 271.0
## 5542   4.45e-81 271.0
## 5543   7.85e-81 270.0
## 5544   1.02e-80 270.0
## 5545   1.26e-80 269.0
## 5546   2.20e-80 268.0
## 5547   3.92e-80 268.0
## 5548   1.54e-79 266.0
## 5549   4.69e-79 265.0
## 5550   5.96e-79 265.0
## 5551   7.88e-79 264.0
## 5552   3.96e-73 248.0
## 5553   4.31e-71 242.0
## 5554   6.91e-94 284.0
## 5555   5.13e-90 274.0
## 5556   1.81e-86 265.0
## 5557   7.05e-94 286.0
## 5558   4.27e-92 281.0
## 5559   2.82e-90 277.0
## 5560   6.09e-84 261.0
## 5561   3.25e-83 259.0
## 5562   4.90e-73 233.0
## 5563   4.00e-61 202.0
## 5564   8.12e-46 162.0
## 5565   8.45e-94 284.0
## 5566   1.26e-92 281.0
## 5567   3.81e-92 280.0
## 5568   4.80e-90 275.0
## 5569   1.26e-80 251.0
## 5570   1.76e-13  72.0
## 5571   1.13e-93 300.0
## 5572   1.59e-93 300.0
## 5573   6.77e-91 293.0
## 5574   9.24e-91 292.0
## 5575   7.07e-90 290.0
## 5576   3.68e-89 288.0
## 5577   1.54e-88 286.0
## 5578   5.50e-88 285.0
## 5579   5.59e-87 282.0
```

```
## 5580   3.67e-86 280.0
## 5581   8.05e-86 279.0
## 5582   5.17e-85 277.0
## 5583   8.84e-85 276.0
## 5584   4.15e-84 275.0
## 5585   2.42e-83 273.0
## 5586   4.13e-83 272.0
## 5587   6.45e-82 269.0
## 5588   2.34e-79 262.0
## 5589   8.94e-79 260.0
## 5590   1.21e-93 299.0
## 5591   9.38e-93 297.0
## 5592   1.29e-91 294.0
## 5593   2.74e-91 293.0
## 5594   6.58e-91 292.0
## 5595   1.30e-90 291.0
## 5596   1.44e-90 291.0
## 5597   1.85e-90 291.0
## 5598   2.45e-90 290.0
## 5599   1.27e-89 288.0
## 5600   2.53e-89 288.0
## 5601   3.42e-89 287.0
## 5602   3.57e-89 287.0
## 5603   6.26e-89 287.0
## 5604   8.55e-89 286.0
## 5605   2.30e-88 285.0
## 5606   3.34e-88 285.0
## 5607   1.08e-87 283.0
## 5608   1.61e-87 283.0
## 5609   1.88e-87 283.0
## 5610   2.22e-87 283.0
## 5611   1.20e-86 281.0
## 5612   5.56e-84 273.0
## 5613   9.23e-49 177.0
## 5614   1.40e-93 285.0
## 5615   1.06e-89 275.0
## 5616   8.47e-89 272.0
## 5617   5.09e-85 263.0
## 5618   1.00e-67 218.0
## 5619   3.17e-45 159.0
## 5620   6.41e-35 132.0
## 5621   6.37e-31 121.0
## 5622   1.40e-93 285.0
## 5623   1.06e-89 275.0
## 5624   8.47e-89 272.0
## 5625   5.09e-85 263.0
## 5626   1.00e-67 218.0
## 5627   3.17e-45 159.0
## 5628   6.41e-35 132.0
## 5629   6.37e-31 121.0
## 5630   1.40e-93 285.0
## 5631   1.06e-89 275.0
## 5632   8.47e-89 272.0
## 5633   5.09e-85 263.0
```

```
## 5634   1.00e-67 218.0
## 5635   3.17e-45 159.0
## 5636   6.41e-35 132.0
## 5637   6.37e-31 121.0
## 5638   1.40e-93 285.0
## 5639   1.06e-89 275.0
## 5640   8.47e-89 272.0
## 5641   5.09e-85 263.0
## 5642   1.00e-67 218.0
## 5643   3.17e-45 159.0
## 5644   6.41e-35 132.0
## 5645   6.37e-31 121.0
## 5646   1.49e-93 291.0
## 5647   2.99e-92 288.0
## 5648   3.15e-92 288.0
## 5649   4.73e-92 288.0
## 5650   3.74e-91 285.0
## 5651   8.90e-91 284.0
## 5652   3.70e-90 283.0
## 5653   6.59e-90 282.0
## 5654   2.48e-89 280.0
## 5655   7.08e-89 279.0
## 5656   6.52e-87 274.0
## 5657   4.03e-81 259.0
## 5658   7.75e-63 211.0
## 5659   1.88e-93 289.0
## 5660   1.45e-92 287.0
## 5661   4.13e-92 286.0
## 5662   4.70e-92 286.0
## 5663   4.70e-92 286.0
## 5664   5.82e-92 285.0
## 5665   1.88e-88 276.0
## 5666   4.48e-86 270.0
## 5667   1.52e-79 253.0
## 5668   2.06e-93 286.0
## 5669   2.32e-92 283.0
## 5670   3.46e-88 272.0
## 5671   2.22e-87 270.0
## 5672   3.07e-84 262.0
## 5673   1.63e-72 232.0
## 5674   2.06e-93 286.0
## 5675   2.32e-92 283.0
## 5676   3.46e-88 272.0
## 5677   2.22e-87 270.0
## 5678   3.07e-84 262.0
## 5679   1.63e-72 232.0
## 5680   2.06e-93 286.0
## 5681   2.32e-92 283.0
## 5682   3.46e-88 272.0
## 5683   2.22e-87 270.0
## 5684   3.07e-84 262.0
## 5685   1.63e-72 232.0
## 5686   2.06e-93 286.0
## 5687   2.32e-92 283.0
```

```
## 5688   3.46e-88 272.0
## 5689   2.22e-87 270.0
## 5690   3.07e-84 262.0
## 5691   1.63e-72 232.0
## 5692   2.06e-93 286.0
## 5693   2.32e-92 283.0
## 5694   3.46e-88 272.0
## 5695   2.22e-87 270.0
## 5696   3.07e-84 262.0
## 5697   1.63e-72 232.0
## 5698   2.06e-93 286.0
## 5699   2.32e-92 283.0
## 5700   3.46e-88 272.0
## 5701   2.22e-87 270.0
## 5702   3.07e-84 262.0
## 5703   1.63e-72 232.0
## 5704   2.06e-93 286.0
## 5705   2.32e-92 283.0
## 5706   3.46e-88 272.0
## 5707   2.22e-87 270.0
## 5708   3.07e-84 262.0
## 5709   1.63e-72 232.0
## 5710   2.06e-93 286.0
## 5711   2.32e-92 283.0
## 5712   3.46e-88 272.0
## 5713   2.22e-87 270.0
## 5714   3.07e-84 262.0
## 5715   1.63e-72 232.0
## 5716   2.06e-93 286.0
## 5717   2.32e-92 283.0
## 5718   3.46e-88 272.0
## 5719   2.22e-87 270.0
## 5720   3.07e-84 262.0
## 5721   1.63e-72 232.0
## 5722   2.06e-93 286.0
## 5723   2.32e-92 283.0
## 5724   3.46e-88 272.0
## 5725   2.22e-87 270.0
## 5726   3.07e-84 262.0
## 5727   1.63e-72 232.0
## 5728   2.06e-93 286.0
## 5729   2.32e-92 283.0
## 5730   3.46e-88 272.0
## 5731   2.22e-87 270.0
## 5732   3.07e-84 262.0
## 5733   1.63e-72 232.0
## 5734   2.07e-93 284.0
## 5735   2.10e-93 286.0
## 5736   2.27e-92 283.0
## 5737   3.50e-88 272.0
## 5738   2.17e-87 270.0
## 5739   3.10e-84 262.0
## 5740   1.62e-72 232.0
## 5741   2.10e-93 286.0
```

```
## 5742   2.27e-92 283.0
## 5743   3.50e-88 272.0
## 5744   2.17e-87 270.0
## 5745   3.10e-84 262.0
## 5746   1.62e-72 232.0
## 5747   2.10e-93 286.0
## 5748   2.27e-92 283.0
## 5749   3.50e-88 272.0
## 5750   2.17e-87 270.0
## 5751   3.10e-84 262.0
## 5752   1.62e-72 232.0
## 5753   2.21e-93 305.0
## 5754   4.25e-93 304.0
## 5755   7.48e-92 301.0
## 5756   6.90e-91 298.0
## 5757   1.16e-90 297.0
## 5758   1.22e-90 297.0
## 5759   4.67e-90 296.0
## 5760   4.46e-89 293.0
## 5761   5.07e-89 293.0
## 5762   1.70e-88 291.0
## 5763   3.03e-88 290.0
## 5764   4.70e-87 287.0
## 5765   6.44e-87 287.0
## 5766   1.19e-86 286.0
## 5767   1.75e-86 286.0
## 5768   3.58e-86 285.0
## 5769   5.79e-86 284.0
## 5770   6.14e-86 284.0
## 5771   1.57e-85 283.0
## 5772   2.42e-85 282.0
## 5773   3.28e-85 282.0
## 5774   3.34e-85 282.0
## 5775   4.14e-85 281.0
## 5776   4.99e-85 281.0
## 5777   9.33e-85 281.0
## 5778   1.07e-84 280.0
## 5779   2.04e-84 280.0
## 5780   5.87e-84 278.0
## 5781   1.89e-83 277.0
## 5782   3.37e-83 276.0
## 5783   3.03e-82 273.0
## 5784   3.40e-82 273.0
## 5785   8.21e-78 261.0
## 5786   3.35e-76 256.0
## 5787   1.05e-62 218.0
## 5788   1.28e-42 159.0
## 5789   2.21e-93 305.0
## 5790   4.25e-93 304.0
## 5791   7.48e-92 301.0
## 5792   6.90e-91 298.0
## 5793   1.16e-90 297.0
## 5794   1.22e-90 297.0
## 5795   4.67e-90 296.0
```

```
## 5796   4.46e-89 293.0
## 5797   5.07e-89 293.0
## 5798   1.70e-88 291.0
## 5799   3.03e-88 290.0
## 5800   4.70e-87 287.0
## 5801   6.44e-87 287.0
## 5802   1.19e-86 286.0
## 5803   1.75e-86 286.0
## 5804   3.58e-86 285.0
## 5805   5.79e-86 284.0
## 5806   6.14e-86 284.0
## 5807   1.57e-85 283.0
## 5808   2.42e-85 282.0
## 5809   3.28e-85 282.0
## 5810   3.34e-85 282.0
## 5811   4.14e-85 281.0
## 5812   4.99e-85 281.0
## 5813   9.33e-85 281.0
## 5814   1.07e-84 280.0
## 5815   2.04e-84 280.0
## 5816   5.87e-84 278.0
## 5817   1.89e-83 277.0
## 5818   3.37e-83 276.0
## 5819   3.03e-82 273.0
## 5820   3.40e-82 273.0
## 5821   8.21e-78 261.0
## 5822   3.35e-76 256.0
## 5823   1.05e-62 218.0
## 5824   1.28e-42 159.0
## 5825   2.28e-93 305.0
## 5826   1.63e-90 296.0
## 5827   2.81e-89 293.0
## 5828   5.15e-89 292.0
## 5829   7.36e-89 292.0
## 5830   9.62e-89 291.0
## 5831   1.10e-88 291.0
## 5832   2.17e-88 291.0
## 5833   2.73e-87 288.0
## 5834   4.99e-87 287.0
## 5835   3.09e-85 282.0
## 5836   3.80e-85 281.0
## 5837   5.26e-85 281.0
## 5838   1.65e-84 280.0
## 5839   1.95e-84 280.0
## 5840   2.81e-84 279.0
## 5841   3.04e-84 279.0
## 5842   1.86e-83 277.0
## 5843   5.98e-83 275.0
## 5844   6.72e-83 275.0
## 5845   1.18e-81 271.0
## 5846   1.93e-81 271.0
## 5847   2.80e-81 271.0
## 5848   3.40e-81 270.0
## 5849   1.22e-80 269.0
```

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## 5850   1.52e-80 268.0
## 5851   1.31e-79 266.0
## 5852   6.25e-78 261.0
## 5853   2.23e-74 251.0
## 5854   4.35e-72 244.0
## 5855   2.37e-93 306.0
## 5856   1.83e-91 300.0
## 5857   1.01e-90 298.0
## 5858   1.49e-88 292.0
## 5859   1.54e-88 292.0
## 5860   2.77e-88 291.0
## 5861   3.63e-88 291.0
## 5862   2.67e-87 288.0
## 5863   5.14e-87 288.0
## 5864   7.78e-87 287.0
## 5865   8.32e-87 287.0
## 5866   1.46e-86 286.0
## 5867   3.67e-86 285.0
## 5868   4.67e-86 285.0
## 5869   9.17e-86 284.0
## 5870   1.20e-85 284.0
## 5871   1.24e-85 283.0
## 5872   2.10e-85 283.0
## 5873   2.25e-85 283.0
## 5874   2.52e-85 283.0
## 5875   3.03e-85 283.0
## 5876   3.34e-85 282.0
## 5877   5.83e-85 281.0
## 5878   8.01e-85 281.0
## 5879   9.26e-85 281.0
## 5880   1.63e-84 280.0
## 5881   1.93e-84 280.0
## 5882   5.00e-84 279.0
## 5883   8.17e-84 278.0
## 5884   1.57e-83 278.0
## 5885   4.08e-83 276.0
## 5886   8.00e-83 275.0
## 5887   1.32e-81 272.0
## 5888   9.21e-81 270.0
## 5889   1.12e-80 269.0
## 5890   3.98e-80 268.0
## 5891   1.59e-76 257.0
## 5892   3.69e-75 253.0
## 5893   4.09e-45 167.0
## 5894   2.55e-93 288.0
## 5895   4.87e-93 287.0
## 5896   4.05e-90 280.0
## 5897   4.98e-89 277.0
## 5898   1.22e-86 271.0
## 5899   2.25e-86 270.0
## 5900   2.35e-81 257.0
## 5901   2.65e-93 287.0
## 5902   3.90e-93 287.0
## 5903   4.95e-93 286.0
```

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## 5904   1.71e-92 285.0
## 5905   1.60e-91 283.0
## 5906   1.07e-89 278.0
## 5907   3.95e-88 274.0
## 5908   2.04e-85 267.0
## 5909   2.52e-76 243.0
## 5910   2.76e-93 293.0
## 5911   7.31e-92 290.0
## 5912   6.27e-90 285.0
## 5913   1.20e-89 284.0
## 5914   3.77e-89 283.0
## 5915   1.17e-88 281.0
## 5916   2.32e-88 281.0
## 5917   4.76e-88 280.0
## 5918   9.49e-88 279.0
## 5919   7.04e-87 277.0
## 5920   8.84e-84 269.0
## 5921   1.17e-79 258.0
## 5922   1.51e-78 255.0
## 5923   1.32e-20  94.4
## 5924   2.91e-93 284.0
## 5925   1.75e-86 266.0
## 5926   3.71e-78 245.0
## 5927   1.01e-77 244.0
## 5928   2.94e-93 287.0
## 5929   9.82e-91 281.0
## 5930   2.88e-90 280.0
## 5931   1.12e-85 268.0
## 5932   7.71e-85 266.0
## 5933   6.80e-78 248.0
## 5934   1.08e-58 198.0
## 5935   1.13e-39 147.0
## 5936   1.69e-09  60.5
## 5937   2.98e-93 306.0
## 5938   5.80e-93 305.0
## 5939   1.06e-92 304.0
## 5940   1.76e-92 303.0
## 5941   8.45e-92 301.0
## 5942   3.42e-91 300.0
## 5943   6.27e-91 299.0
## 5944   1.51e-90 298.0
## 5945   1.74e-90 298.0
## 5946   1.77e-90 298.0
## 5947   3.95e-90 296.0
## 5948   5.22e-90 296.0
## 5949   1.84e-89 295.0
## 5950   2.51e-89 294.0
## 5951   3.48e-89 294.0
## 5952   4.34e-89 294.0
## 5953   4.65e-89 293.0
## 5954   7.24e-89 293.0
## 5955   8.69e-89 293.0
## 5956   9.39e-89 293.0
## 5957   2.23e-88 291.0
```

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## 5958   2.87e-88 291.0
## 5959   3.35e-88 291.0
## 5960   5.52e-88 290.0
## 5961   1.02e-87 290.0
## 5962   1.05e-87 290.0
## 5963   1.15e-87 290.0
## 5964   1.19e-87 290.0
## 5965   1.43e-87 289.0
## 5966   3.10e-87 288.0
## 5967   3.58e-87 288.0
## 5968   5.16e-87 288.0
## 5969   5.90e-87 288.0
## 5970   9.83e-87 287.0
## 5971   1.43e-86 286.0
## 5972   1.82e-86 286.0
## 5973   2.84e-86 286.0
## 5974   3.21e-86 285.0
## 5975   3.50e-86 285.0
## 5976   3.57e-86 285.0
## 5977   7.28e-86 285.0
## 5978   8.83e-86 284.0
## 5979   1.02e-85 284.0
## 5980   1.35e-85 284.0
## 5981   1.44e-85 283.0
## 5982   1.72e-85 283.0
## 5983   1.84e-85 283.0
## 5984   2.02e-85 283.0
## 5985   5.14e-85 282.0
## 5986   5.77e-85 282.0
## 5987   6.54e-85 281.0
## 5988   9.16e-85 281.0
## 5989   9.52e-85 281.0
## 5990   1.40e-84 281.0
## 5991   1.56e-84 281.0
## 5992   1.60e-84 281.0
## 5993   1.68e-84 280.0
## 5994   1.80e-84 280.0
## 5995   1.87e-84 280.0
## 5996   2.20e-84 280.0
## 5997   2.33e-84 280.0
## 5998   2.40e-84 280.0
## 5999   2.97e-84 280.0
## 6000   2.99e-84 280.0
## 6001   3.05e-84 280.0
## 6002   3.11e-84 280.0
## 6003   3.23e-84 280.0
## 6004   8.31e-84 278.0
## 6005   8.55e-84 278.0
## 6006   1.02e-83 278.0
## 6007   1.06e-83 278.0
## 6008   1.13e-83 278.0
## 6009   2.56e-83 277.0
## 6010   2.66e-83 277.0
## 6011   3.11e-83 277.0
```

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## 6012   3.52e-83 277.0
## 6013   5.98e-83 276.0
## 6014   6.21e-83 276.0
## 6015   8.62e-83 276.0
## 6016   1.14e-82 275.0
## 6017   1.23e-82 275.0
## 6018   1.37e-82 275.0
## 6019   1.90e-82 275.0
## 6020   2.15e-82 275.0
## 6021   2.51e-82 274.0
## 6022   2.51e-82 274.0
## 6023   2.71e-82 274.0
## 6024   3.07e-82 274.0
## 6025   3.98e-82 274.0
## 6026   5.47e-82 273.0
## 6027   8.52e-82 273.0
## 6028   1.08e-81 272.0
## 6029   1.26e-81 272.0
## 6030   1.34e-81 272.0
## 6031   2.34e-81 271.0
## 6032   2.81e-81 271.0
## 6033   3.06e-81 271.0
## 6034   3.21e-81 271.0
## 6035   4.13e-81 271.0
## 6036   1.44e-80 269.0
## 6037   1.94e-80 269.0
## 6038   2.64e-80 268.0
## 6039   4.94e-80 268.0
## 6040   5.71e-80 268.0
## 6041   5.07e-79 265.0
## 6042   5.86e-79 265.0
## 6043   6.21e-79 265.0
## 6044   9.12e-79 264.0
## 6045   1.19e-78 264.0
## 6046   2.65e-78 263.0
## 6047   2.78e-78 263.0
## 6048   5.10e-78 262.0
## 6049   6.31e-78 261.0
## 6050   9.63e-78 261.0
## 6051   1.30e-77 261.0
## 6052   1.89e-77 260.0
## 6053   1.98e-77 260.0
## 6054   6.53e-77 259.0
## 6055   1.14e-76 258.0
## 6056   1.75e-75 254.0
## 6057   2.75e-75 254.0
## 6058   3.64e-75 254.0
## 6059   2.51e-74 251.0
## 6060   7.03e-74 250.0
## 6061   2.90e-72 245.0
## 6062   4.25e-70 239.0
## 6063   3.41e-93 286.0
## 6064   8.92e-93 285.0
## 6065   4.81e-92 283.0
```

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## 6066   3.18e-91 281.0
## 6067   7.25e-80 252.0
## 6068   3.41e-93 286.0
## 6069   8.92e-93 285.0
## 6070   4.81e-92 283.0
## 6071   3.18e-91 281.0
## 6072   7.25e-80 252.0
## 6073   3.44e-93 284.0
## 6074   1.57e-92 283.0
## 6075   1.03e-90 278.0
## 6076   4.91e-90 276.0
## 6077   2.39e-66 215.0
## 6078   1.56e-44 158.0
## 6079   4.14e-93 301.0
## 6080   9.14e-93 300.0
## 6081   7.35e-92 297.0
## 6082   8.58e-92 297.0
## 6083   1.68e-90 294.0
## 6084   2.72e-90 293.0
## 6085   5.03e-90 292.0
## 6086   5.19e-90 292.0
## 6087   7.66e-90 292.0
## 6088   1.40e-88 288.0
## 6089   3.14e-88 288.0
## 6090   9.67e-88 286.0
## 6091   1.03e-85 281.0
## 6092   1.27e-83 275.0
## 6093   2.14e-82 271.0
## 6094   1.01e-81 270.0
## 6095   1.37e-81 270.0
## 6096   5.32e-80 265.0
## 6097   4.26e-93 281.0
## 6098   3.14e-86 263.0
## 6099   5.04e-93 300.0
## 6100   3.90e-92 298.0
## 6101   2.40e-91 296.0
## 6102   2.45e-91 296.0
## 6103   2.63e-91 296.0
## 6104   2.69e-91 296.0
## 6105   8.23e-91 295.0
## 6106   1.01e-90 294.0
## 6107   1.11e-89 291.0
## 6108   1.45e-89 291.0
## 6109   1.68e-89 291.0
## 6110   7.63e-89 289.0
## 6111   4.52e-88 287.0
## 6112   8.35e-88 286.0
## 6113   6.00e-87 284.0
## 6114   2.38e-86 282.0
## 6115   1.18e-82 272.0
## 6116   6.09e-80 265.0
## 6117   2.04e-78 261.0
## 6118   2.15e-78 261.0
## 6119   2.53e-78 260.0
```

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## 6120   1.51e-59 208.0
## 6121   1.25e-49 179.0
## 6122   5.17e-93 300.0
## 6123   4.88e-92 298.0
## 6124   4.88e-92 298.0
## 6125   2.85e-90 293.0
## 6126   2.32e-88 288.0
## 6127   2.88e-87 285.0
## 6128   2.00e-86 282.0
## 6129   4.77e-86 281.0
## 6130   8.63e-86 281.0
## 6131   4.20e-85 279.0
## 6132   4.74e-85 279.0
## 6133   4.84e-85 279.0
## 6134   1.82e-84 277.0
## 6135   1.22e-82 272.0
## 6136   1.63e-82 272.0
## 6137   2.69e-82 271.0
## 6138   6.47e-80 265.0
## 6139   1.05e-79 264.0
## 6140   1.97e-76 255.0
## 6141   3.50e-76 254.0
## 6142   8.31e-45 166.0
## 6143   5.52e-93 292.0
## 6144   3.42e-90 285.0
## 6145   5.77e-89 282.0
## 6146   2.37e-88 280.0
## 6147   2.84e-88 280.0
## 6148   1.50e-87 278.0
## 6149   4.04e-87 277.0
## 6150   4.59e-87 277.0
## 6151   6.04e-86 274.0
## 6152   1.49e-85 273.0
## 6153   3.08e-84 270.0
## 6154   1.80e-83 268.0
## 6155   7.06e-83 266.0
## 6156   4.39e-68 227.0
## 6157   1.12e-40 152.0
## 6158   2.40e-02  38.1
## 6159   6.93e-93 295.0
## 6160   4.80e-92 292.0
## 6161   2.04e-90 288.0
## 6162   3.14e-89 285.0
## 6163   5.78e-89 284.0
## 6164   1.48e-85 275.0
## 6165   5.55e-85 274.0
## 6166   2.24e-83 270.0
## 6167   2.32e-82 267.0
## 6168   6.86e-81 263.0
## 6169   7.20e-93 283.0
## 6170   2.12e-88 271.0
## 6171   1.53e-87 269.0
## 6172   9.81e-58 192.0
## 6173   7.82e-93 299.0
```

```
## 6174   3.22e-92 298.0
## 6175   6.23e-92 297.0
## 6176   5.10e-91 295.0
## 6177   7.47e-91 294.0
## 6178   1.22e-90 293.0
## 6179   1.60e-90 293.0
## 6180   3.12e-90 292.0
## 6181   4.08e-90 292.0
## 6182   1.45e-89 290.0
## 6183   3.51e-89 290.0
## 6184   6.30e-89 289.0
## 6185   1.06e-88 288.0
## 6186   2.68e-88 287.0
## 6187   3.92e-88 286.0
## 6188   4.82e-88 286.0
## 6189   1.77e-87 285.0
## 6190   2.34e-87 285.0
## 6191   1.80e-86 282.0
## 6192   1.05e-85 280.0
## 6193   1.54e-84 277.0
## 6194   2.20e-83 274.0
## 6195   1.52e-80 266.0
## 6196   4.46e-80 265.0
## 6197   3.27e-71 240.0
## 6198   1.42e-68 233.0
## 6199   1.68e-17  85.5
## 6200   9.92e-12  67.8
## 6201   1.04e-92 281.0
## 6202   3.44e-83 256.0
## 6203   2.91e-81 251.0
## 6204   3.74e-59 194.0
## 6205   1.04e-92 282.0
## 6206   8.82e-85 262.0
## 6207   5.31e-84 260.0
## 6208   4.23e-51 175.0
## 6209   1.07e-92 281.0
## 6210   5.95e-89 272.0
## 6211   3.46e-76 239.0
## 6212   2.79e-55 185.0
## 6213   1.10e-92 285.0
## 6214   8.92e-91 280.0
## 6215   1.34e-87 272.0
## 6216   2.37e-86 269.0
## 6217   3.05e-83 261.0
## 6218   7.56e-73 234.0
## 6219   4.90e-01  33.9
## 6220   1.11e-92 290.0
## 6221   2.84e-91 286.0
## 6222   1.65e-89 282.0
## 6223   2.28e-86 274.0
## 6224   6.81e-86 273.0
## 6225   2.17e-85 271.0
## 6226   5.43e-85 270.0
## 6227   7.24e-85 270.0
```

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## 6228   1.36e-83 267.0
## 6229   1.09e-58 201.0
## 6230   1.48e-92 283.0
## 6231   2.39e-91 280.0
## 6232   6.00e-91 279.0
## 6233   6.99e-75 238.0
## 6234   1.50e-92 284.0
## 6235   1.12e-91 282.0
## 6236   4.05e-91 280.0
## 6237   2.65e-90 278.0
## 6238   4.65e-90 278.0
## 6239   1.42e-87 271.0
## 6240   5.74e-73 234.0
## 6241   4.14e-66 216.0
## 6242   4.95e-56 189.0
## 6243   1.86e-38 143.0
## 6244   2.99e-15  77.8
## 6245   8.83e-10  61.2
## 6246   1.60e-92 278.0
## 6247   3.02e-80 247.0
## 6248   9.27e-57 187.0
## 6249   1.41e-56 186.0
## 6250   1.69e-92 300.0
## 6251   1.07e-91 298.0
## 6252   2.14e-90 294.0
## 6253   8.92e-90 292.0
## 6254   6.12e-89 290.0
## 6255   8.82e-89 290.0
## 6256   1.35e-88 289.0
## 6257   1.82e-88 289.0
## 6258   6.06e-87 285.0
## 6259   6.19e-87 285.0
## 6260   1.41e-86 283.0
## 6261   2.18e-86 283.0
## 6262   3.62e-86 282.0
## 6263   1.45e-85 281.0
## 6264   1.71e-85 281.0
## 6265   1.79e-85 281.0
## 6266   3.04e-85 280.0
## 6267   3.09e-84 277.0
## 6268   3.97e-84 277.0
## 6269   4.63e-84 276.0
## 6270   6.14e-84 276.0
## 6271   6.46e-84 276.0
## 6272   1.06e-83 276.0
## 6273   6.59e-83 273.0
## 6274   6.38e-82 271.0
## 6275   3.17e-81 269.0
## 6276   6.82e-75 251.0
## 6277   1.71e-92 283.0
## 6278   3.21e-90 277.0
## 6279   1.16e-85 265.0
## 6280   9.05e-80 250.0
## 6281   1.84e-92 281.0
```

```
## 6282   2.16e-92 287.0
## 6283   7.05e-92 285.0
## 6284   1.65e-91 285.0
## 6285   3.90e-83 263.0
## 6286   6.84e-81 257.0
## 6287   1.73e-80 256.0
## 6288   2.80e-02  37.7
## 6289   2.16e-92 287.0
## 6290   7.05e-92 285.0
## 6291   1.65e-91 285.0
## 6292   3.90e-83 263.0
## 6293   6.84e-81 257.0
## 6294   1.73e-80 256.0
## 6295   2.80e-02  37.7
## 6296   2.16e-92 287.0
## 6297   7.05e-92 285.0
## 6298   1.65e-91 285.0
## 6299   3.90e-83 263.0
## 6300   6.84e-81 257.0
## 6301   1.73e-80 256.0
## 6302   2.80e-02  37.7
## 6303   2.23e-92 302.0
## 6304   2.63e-90 296.0
## 6305   1.45e-88 291.0
## 6306   2.59e-88 291.0
## 6307   3.06e-88 290.0
## 6308   4.19e-88 290.0
## 6309   7.57e-88 289.0
## 6310   1.55e-87 288.0
## 6311   4.24e-87 287.0
## 6312   4.54e-87 287.0
## 6313   6.60e-87 286.0
## 6314   2.69e-86 285.0
## 6315   1.37e-85 283.0
## 6316   9.39e-85 281.0
## 6317   1.15e-84 280.0
## 6318   2.60e-84 279.0
## 6319   2.71e-84 279.0
## 6320   5.02e-84 278.0
## 6321   6.22e-81 270.0
## 6322   1.56e-79 266.0
## 6323   3.54e-79 265.0
## 6324   3.69e-78 262.0
## 6325   7.86e-78 261.0
## 6326   2.51e-92 288.0
## 6327   3.65e-92 287.0
## 6328   1.45e-91 286.0
## 6329   2.08e-90 283.0
## 6330   2.34e-90 283.0
## 6331   2.96e-89 280.0
## 6332   5.22e-89 279.0
## 6333   6.75e-89 279.0
## 6334   1.38e-88 278.0
## 6335   1.68e-88 278.0
```

```
## 6336   9.60e-85 268.0
## 6337   2.55e-92 281.0
## 6338   2.14e-89 273.0
## 6339   4.24e-88 270.0
## 6340   2.28e-57 191.0
## 6341   2.64e-92 283.0
## 6342   2.13e-90 278.0
## 6343   5.68e-88 272.0
## 6344   9.43e-88 271.0
## 6345   4.36e-60 200.0
## 6346   2.43e-51 177.0
## 6347   3.61e-92 282.0
## 6348   1.57e-91 280.0
## 6349   2.80e-90 277.0
## 6350   1.10e-65 214.0
## 6351   3.66e-92 291.0
## 6352   7.00e-89 283.0
## 6353   3.02e-88 281.0
## 6354   4.02e-88 281.0
## 6355   2.61e-87 279.0
## 6356   1.56e-86 276.0
## 6357   2.64e-84 271.0
## 6358   4.97e-84 270.0
## 6359   2.44e-83 268.0
## 6360   1.33e-82 266.0
## 6361   3.51e-82 265.0
## 6362   1.30e-81 264.0
## 6363   1.65e-78 256.0
## 6364   3.08e-44 163.0
## 6365   1.15e-34 135.0
## 6366   3.95e-92 302.0
## 6367   6.86e-92 301.0
## 6368   1.13e-90 298.0
## 6369   1.08e-89 295.0
## 6370   1.18e-89 295.0
## 6371   1.04e-88 292.0
## 6372   2.22e-88 291.0
## 6373   2.62e-88 291.0
## 6374   1.17e-87 290.0
## 6375   1.29e-87 289.0
## 6376   1.38e-87 289.0
## 6377   3.99e-87 288.0
## 6378   6.03e-87 287.0
## 6379   6.52e-87 287.0
## 6380   2.69e-86 285.0
## 6381   3.96e-86 285.0
## 6382   1.53e-84 280.0
## 6383   1.79e-84 280.0
## 6384   5.21e-84 279.0
## 6385   2.23e-83 277.0
## 6386   5.37e-83 276.0
## 6387   7.24e-83 276.0
## 6388   1.11e-82 275.0
## 6389   1.66e-81 272.0
```

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## 6390   2.07e-81 271.0
## 6391   8.19e-81 270.0
## 6392   2.62e-79 265.0
## 6393   2.26e-78 263.0
## 6394   7.04e-61 212.0
## 6395   2.99e-53 190.0
## 6396   1.42e-41 156.0
## 6397   7.59e-92 283.0
## 6398   7.26e-87 270.0
## 6399   1.57e-81 256.0
## 6400   5.14e-81 255.0
## 6401   4.56e-50 174.0
## 6402   1.33e-40 149.0
## 6403   7.97e-92 297.0
## 6404   3.11e-88 288.0
## 6405   2.59e-86 282.0
## 6406   3.66e-86 282.0
## 6407   6.67e-86 281.0
## 6408   2.53e-85 280.0
## 6409   7.53e-85 278.0
## 6410   2.77e-84 277.0
## 6411   3.36e-84 276.0
## 6412   8.39e-84 275.0
## 6413   4.57e-82 271.0
## 6414   2.70e-78 260.0
## 6415   4.55e-78 260.0
## 6416   2.46e-66 227.0
## 6417   1.95e-62 216.0
## 6418   5.48e-58 203.0
## 6419   9.81e-39 148.0
## 6420   3.27e-09  60.1
## 6421   8.01e-92 295.0
## 6422   4.24e-91 293.0
## 6423   2.07e-90 291.0
## 6424   3.57e-89 288.0
## 6425   4.31e-89 288.0
## 6426   2.52e-88 285.0
## 6427   4.10e-88 285.0
## 6428   1.03e-87 284.0
## 6429   8.50e-87 281.0
## 6430   1.33e-86 281.0
## 6431   1.77e-86 281.0
## 6432   2.27e-86 280.0
## 6433   3.01e-86 280.0
## 6434   6.55e-86 279.0
## 6435   7.26e-86 279.0
## 6436   1.13e-85 278.0
## 6437   2.85e-85 277.0
## 6438   3.50e-85 277.0
## 6439   8.83e-84 273.0
## 6440   1.42e-83 273.0
## 6441   1.62e-83 273.0
## 6442   1.58e-79 262.0
## 6443   3.53e-63 217.0
```

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## 6444   1.20e-42 159.0
## 6445   2.84e-33 132.0
## 6446   8.06e-92 279.0
## 6447   1.26e-88 271.0
## 6448   2.96e-86 265.0
## 6449   2.12e-81 253.0
## 6450   9.87e-92 286.0
## 6451   1.25e-88 278.0
## 6452   3.76e-88 276.0
## 6453   6.92e-88 276.0
## 6454   2.40e-86 272.0
## 6455   2.13e-85 270.0
## 6456   1.66e-84 267.0
## 6457   4.46e-83 263.0
## 6458   1.88e-77 249.0
## 6459   2.12e-74 241.0
## 6460   4.46e-59 201.0
## 6461   3.79e-32 127.0
## 6462   5.26e-30 121.0
## 6463   9.93e-92 299.0
## 6464   3.57e-89 292.0
## 6465   8.79e-89 291.0
## 6466   1.23e-88 291.0
## 6467   2.18e-88 290.0
## 6468   3.49e-88 290.0
## 6469   5.15e-88 289.0
## 6470   8.66e-88 288.0
## 6471   1.09e-87 288.0
## 6472   1.58e-87 288.0
## 6473   1.83e-87 287.0
## 6474   1.94e-87 287.0
## 6475   2.19e-87 287.0
## 6476   1.22e-86 285.0
## 6477   1.24e-86 285.0
## 6478   2.05e-86 285.0
## 6479   4.63e-86 283.0
## 6480   4.72e-86 283.0
## 6481   2.28e-85 281.0
## 6482   4.13e-85 281.0
## 6483   7.14e-85 280.0
## 6484   1.93e-84 279.0
## 6485   2.84e-84 278.0
## 6486   3.17e-84 278.0
## 6487   8.16e-82 272.0
## 6488   1.08e-81 271.0
## 6489   5.66e-81 269.0
## 6490   7.74e-80 266.0
## 6491   1.17e-78 263.0
## 6492   5.23e-72 244.0
## 6493   9.37e-69 235.0
## 6494   2.32e-61 213.0
## 6495   7.93e-42 157.0
## 6496   1.20e-91 278.0
## 6497   8.11e-88 269.0
```

```
## 6498   1.71e-69 222.0
## 6499   1.23e-91 278.0
## 6500   1.99e-85 262.0
## 6501   5.01e-48 166.0
## 6502   1.26e-91 284.0
## 6503   1.85e-89 279.0
## 6504   3.35e-89 278.0
## 6505   4.17e-85 267.0
## 6506   5.91e-81 257.0
## 6507   1.11e-75 243.0
## 6508   1.33e-91 285.0
## 6509   1.67e-88 277.0
## 6510   5.04e-88 276.0
## 6511   9.60e-88 275.0
## 6512   3.44e-86 271.0
## 6513   2.84e-85 269.0
## 6514   2.20e-84 266.0
## 6515   5.22e-83 263.0
## 6516   2.38e-77 248.0
## 6517   2.54e-74 240.0
## 6518   5.16e-59 200.0
## 6519   4.75e-32 127.0
## 6520   6.25e-30 121.0
## 6521   1.42e-91 279.0
## 6522   2.67e-91 278.0
## 6523   1.49e-77 243.0
## 6524   1.85e-41 149.0
## 6525   1.43e-91 278.0
## 6526   1.43e-86 265.0
## 6527   1.18e-75 237.0
## 6528   1.52e-91 295.0
## 6529   7.07e-90 290.0
## 6530   1.76e-89 289.0
## 6531   4.25e-89 288.0
## 6532   7.59e-89 287.0
## 6533   2.07e-88 286.0
## 6534   2.50e-88 286.0
## 6535   4.70e-88 285.0
## 6536   6.57e-87 282.0
## 6537   3.06e-86 280.0
## 6538   9.81e-85 276.0
## 6539   1.34e-84 276.0
## 6540   3.95e-84 275.0
## 6541   1.12e-83 273.0
## 6542   1.76e-83 273.0
## 6543   7.27e-83 271.0
## 6544   1.75e-80 265.0
## 6545   5.76e-79 261.0
## 6546   1.64e-78 259.0
## 6547   7.55e-60 208.0
## 6548   1.55e-91 286.0
## 6549   2.82e-89 280.0
## 6550   1.32e-88 279.0
## 6551   1.37e-88 279.0
```

```
## 6552   1.15e-86 274.0
## 6553   1.01e-84 268.0
## 6554   1.24e-74 242.0
## 6555   7.26e-74 240.0
## 6556   2.65e-43 159.0
## 6557   1.69e-91 296.0
## 6558   4.10e-91 295.0
## 6559   8.02e-91 294.0
## 6560   4.09e-90 292.0
## 6561   4.67e-90 291.0
## 6562   1.42e-89 290.0
## 6563   1.53e-89 290.0
## 6564   1.53e-89 290.0
## 6565   2.81e-89 290.0
## 6566   6.80e-89 288.0
## 6567   7.94e-88 286.0
## 6568   2.90e-87 284.0
## 6569   3.56e-87 284.0
## 6570   4.60e-87 284.0
## 6571   5.26e-87 283.0
## 6572   8.52e-87 283.0
## 6573   2.33e-86 282.0
## 6574   2.95e-86 281.0
## 6575   9.30e-86 280.0
## 6576   1.06e-85 280.0
## 6577   1.08e-84 277.0
## 6578   1.10e-84 277.0
## 6579   4.78e-83 273.0
## 6580   4.38e-82 270.0
## 6581   6.64e-73 245.0
## 6582   1.74e-91 300.0
## 6583   2.06e-90 297.0
## 6584   3.61e-89 294.0
## 6585   7.18e-89 293.0
## 6586   1.50e-88 292.0
## 6587   2.12e-88 291.0
## 6588   3.37e-88 291.0
## 6589   3.68e-88 291.0
## 6590   7.38e-88 290.0
## 6591   3.53e-87 288.0
## 6592   1.35e-86 286.0
## 6593   1.95e-86 286.0
## 6594   9.78e-86 284.0
## 6595   9.88e-86 284.0
## 6596   1.03e-85 284.0
## 6597   1.14e-85 284.0
## 6598   2.02e-85 283.0
## 6599   2.49e-85 283.0
## 6600   3.24e-85 282.0
## 6601   3.89e-85 282.0
## 6602   1.13e-84 281.0
## 6603   1.42e-84 280.0
## 6604   1.87e-84 280.0
## 6605   2.06e-84 280.0
```

```
## 6606   2.53e-84 280.0
## 6607   3.38e-84 280.0
## 6608   5.16e-84 279.0
## 6609   9.75e-84 278.0
## 6610   1.27e-83 278.0
## 6611   2.56e-83 277.0
## 6612   5.12e-83 276.0
## 6613   5.27e-83 276.0
## 6614   5.70e-82 273.0
## 6615   6.10e-82 273.0
## 6616   1.24e-80 269.0
## 6617   1.99e-80 269.0
## 6618   1.28e-66 229.0
## 6619   2.35e-63 219.0
## 6620   1.76e-91 293.0
## 6621   5.63e-91 291.0
## 6622   5.81e-91 291.0
## 6623   1.10e-90 291.0
## 6624   3.37e-90 290.0
## 6625   1.03e-89 288.0
## 6626   3.20e-88 284.0
## 6627   4.29e-88 284.0
## 6628   1.90e-87 282.0
## 6629   4.48e-86 279.0
## 6630   4.97e-86 278.0
## 6631   8.11e-86 278.0
## 6632   1.19e-85 278.0
## 6633   1.73e-85 277.0
## 6634   1.43e-84 275.0
## 6635   1.63e-83 272.0
## 6636   1.37e-70 237.0
## 6637   2.05e-91 280.0
## 6638   6.07e-80 250.0
## 6639   1.23e-78 247.0
## 6640   2.78e-91 296.0
## 6641   4.14e-91 296.0
## 6642   1.11e-87 287.0
## 6643   2.02e-87 286.0
## 6644   4.41e-87 285.0
## 6645   6.03e-87 285.0
## 6646   1.82e-86 283.0
## 6647   2.01e-86 283.0
## 6648   9.26e-86 281.0
## 6649   1.82e-85 281.0
## 6650   2.62e-85 280.0
## 6651   1.73e-84 278.0
## 6652   2.75e-84 278.0
## 6653   1.03e-83 276.0
## 6654   2.24e-83 275.0
## 6655   2.86e-82 272.0
## 6656   1.37e-81 270.0
## 6657   2.85e-81 269.0
## 6658   1.06e-80 268.0
## 6659   7.80e-79 263.0
```

```
## 6660   4.14e-60 210.0
## 6661   3.06e-91 285.0
## 6662   1.42e-77 249.0
## 6663   1.54e-67 223.0
## 6664   5.56e-66 219.0
## 6665   2.19e-64 215.0
## 6666   2.71e-62 209.0
## 6667   3.27e-62 209.0
## 6668   3.06e-91 285.0
## 6669   1.42e-77 249.0
## 6670   1.54e-67 223.0
## 6671   5.56e-66 219.0
## 6672   2.19e-64 215.0
## 6673   2.71e-62 209.0
## 6674   3.27e-62 209.0
## 6675   4.17e-91 280.0
## 6676   1.05e-90 279.0
## 6677   6.15e-90 277.0
## 6678   1.83e-89 276.0
## 6679   2.76e-89 275.0
## 6680   3.43e-89 275.0
## 6681   7.40e-77 243.0
## 6682   1.62e-20  93.2
## 6683   4.21e-91 277.0
## 6684   6.62e-90 274.0
## 6685   2.72e-78 244.0
## 6686   1.72e-41 149.0
## 6687   6.79e-91 289.0
## 6688   1.97e-89 285.0
## 6689   4.68e-88 281.0
## 6690   2.07e-87 280.0
## 6691   3.62e-87 279.0
## 6692   1.55e-86 278.0
## 6693   3.59e-86 276.0
## 6694   9.77e-86 275.0
## 6695   1.96e-85 275.0
## 6696   2.74e-85 274.0
## 6697   3.64e-85 274.0
## 6698   4.13e-85 274.0
## 6699   5.61e-85 273.0
## 6700   8.63e-85 273.0
## 6701   4.33e-82 266.0
## 6702   3.42e-72 239.0
## 6703   4.56e-52 185.0
## 6704   1.03e-90 290.0
## 6705   1.72e-89 286.0
## 6706   3.71e-89 285.0
## 6707   2.01e-86 278.0
## 6708   3.61e-86 278.0
## 6709   9.28e-86 276.0
## 6710   2.67e-85 275.0
## 6711   5.93e-85 274.0
## 6712   7.31e-85 274.0
## 6713   1.52e-84 273.0
```

```
## 6714   2.41e-84 273.0
## 6715   3.91e-84 272.0
## 6716   8.65e-84 271.0
## 6717   2.85e-83 270.0
## 6718   1.23e-64 220.0
## 6719   3.73e-46 169.0
## 6720   1.63e-36 141.0
## 6721   4.72e-28 116.0
## 6722   1.55e-90 275.0
## 6723   6.82e-88 268.0
## 6724   1.96e-74 234.0
## 6725   1.56e-63 206.0
## 6726   1.95e-32 124.0
## 6727   5.19e-07  52.0
## 6728   1.65e-90 283.0
## 6729   1.62e-87 275.0
## 6730   9.20e-83 263.0
## 6731   7.11e-81 258.0
## 6732   5.57e-80 255.0
## 6733   1.89e-75 243.0
## 6734   1.38e-73 239.0
## 6735   9.74e-73 236.0
## 6736   2.09e-64 214.0
## 6737   1.65e-90 283.0
## 6738   1.62e-87 275.0
## 6739   9.20e-83 263.0
## 6740   7.11e-81 258.0
## 6741   5.57e-80 255.0
## 6742   1.89e-75 243.0
## 6743   1.38e-73 239.0
## 6744   9.74e-73 236.0
## 6745   2.09e-64 214.0
## 6746   2.37e-90 275.0
## 6747   1.78e-89 273.0
## 6748   9.47e-78 243.0
## 6749   1.49e-41 149.0
## 6750   2.45e-90 297.0
## 6751   8.58e-88 290.0
## 6752   1.73e-86 286.0
## 6753   1.65e-85 283.0
## 6754   2.34e-85 283.0
## 6755   3.10e-85 282.0
## 6756   4.74e-85 282.0
## 6757   7.24e-85 281.0
## 6758   1.58e-84 280.0
## 6759   2.13e-84 280.0
## 6760   5.49e-84 279.0
## 6761   5.54e-84 279.0
## 6762   1.18e-82 275.0
## 6763   2.02e-82 274.0
## 6764   2.06e-82 274.0
## 6765   2.29e-82 274.0
## 6766   5.39e-82 273.0
## 6767   8.32e-82 273.0
```

```
## 6768   2.31e-81 271.0
## 6769   2.33e-81 271.0
## 6770   2.45e-81 271.0
## 6771   2.72e-81 271.0
## 6772   6.93e-81 270.0
## 6773   9.23e-80 267.0
## 6774   2.20e-79 266.0
## 6775   6.33e-79 264.0
## 6776   1.37e-78 263.0
## 6777   2.15e-78 263.0
## 6778   3.01e-78 262.0
## 6779   4.14e-78 262.0
## 6780   9.46e-78 261.0
## 6781   2.08e-77 260.0
## 6782   4.71e-74 250.0
## 6783   3.60e-72 245.0
## 6784   4.16e-69 236.0
## 6785   3.23e-41 155.0
## 6786   2.47e-90 293.0
## 6787   4.20e-90 293.0
## 6788   1.18e-89 291.0
## 6789   1.35e-89 291.0
## 6790   8.82e-89 289.0
## 6791   1.21e-88 289.0
## 6792   1.29e-88 289.0
## 6793   2.40e-88 288.0
## 6794   9.31e-88 286.0
## 6795   1.21e-87 286.0
## 6796   5.26e-87 285.0
## 6797   8.07e-87 284.0
## 6798   8.32e-87 284.0
## 6799   1.78e-85 280.0
## 6800   4.57e-85 279.0
## 6801   5.11e-85 279.0
## 6802   9.12e-85 278.0
## 6803   9.80e-85 278.0
## 6804   6.34e-84 276.0
## 6805   4.26e-83 274.0
## 6806   4.26e-83 274.0
## 6807   5.32e-83 273.0
## 6808   8.01e-82 270.0
## 6809   1.15e-81 270.0
## 6810   1.85e-80 266.0
## 6811   3.01e-72 244.0
## 6812   1.46e-71 242.0
## 6813   9.18e-50 180.0
## 6814   2.58e-90 296.0
## 6815   1.67e-89 294.0
## 6816   1.62e-88 291.0
## 6817   3.09e-87 287.0
## 6818   3.55e-87 287.0
## 6819   7.02e-87 286.0
## 6820   7.90e-87 286.0
## 6821   1.44e-86 285.0
```

```
## 6822   1.56e-86 285.0
## 6823   1.64e-86 285.0
## 6824   3.28e-86 285.0
## 6825   3.92e-86 284.0
## 6826   7.97e-86 283.0
## 6827   9.42e-86 283.0
## 6828   1.81e-85 282.0
## 6829   3.17e-85 282.0
## 6830   1.09e-84 280.0
## 6831   4.57e-84 278.0
## 6832   5.30e-84 278.0
## 6833   3.72e-83 276.0
## 6834   9.64e-83 275.0
## 6835   1.13e-82 275.0
## 6836   8.27e-82 272.0
## 6837   9.58e-82 272.0
## 6838   1.10e-81 272.0
## 6839   3.14e-81 270.0
## 6840   4.38e-81 270.0
## 6841   2.08e-80 268.0
## 6842   2.12e-80 268.0
## 6843   3.35e-80 268.0
## 6844   2.42e-79 265.0
## 6845   1.22e-78 263.0
## 6846   2.25e-74 251.0
## 6847   1.24e-56 200.0
## 6848   4.80e-13  72.0
## 6849   3.80e-90 278.0
## 6850   1.01e-84 264.0
## 6851   1.15e-82 259.0
## 6852   1.20e-74 238.0
## 6853   1.49e-74 238.0
## 6854   5.94e-53 182.0
## 6855   2.02e-40 148.0
## 6856   4.05e-90 288.0
## 6857   1.85e-89 286.0
## 6858   2.08e-89 286.0
## 6859   4.38e-89 285.0
## 6860   4.72e-89 285.0
## 6861   8.97e-89 284.0
## 6862   3.57e-87 280.0
## 6863   3.80e-87 280.0
## 6864   5.98e-87 279.0
## 6865   6.16e-86 276.0
## 6866   2.46e-85 275.0
## 6867   5.70e-83 269.0
## 6868   4.63e-81 263.0
## 6869   1.39e-80 262.0
## 6870   2.51e-58 202.0
## 6871   2.00e-03  41.6
## 6872   4.46e-90 287.0
## 6873   3.75e-89 285.0
## 6874   2.33e-87 280.0
## 6875   3.73e-84 271.0
```

```
## 6876   6.20e-83 268.0
## 6877   6.76e-80 260.0
## 6878   4.77e-79 258.0
## 6879   3.13e-76 251.0
## 6880   7.87e-70 233.0
## 6881   1.71e-23 103.0
## 6882   5.70e-01  33.9
## 6883   4.51e-90 273.0
## 6884   1.97e-87 266.0
## 6885   5.41e-87 265.0
## 6886   4.53e-90 275.0
## 6887   1.28e-87 268.0
## 6888   5.65e-90 285.0
## 6889   1.86e-89 284.0
## 6890   4.33e-87 278.0
## 6891   2.51e-84 270.0
## 6892   4.73e-84 270.0
## 6893   1.05e-71 237.0
## 6894   1.01e-70 234.0
## 6895   1.41e-70 234.0
## 6896   1.65e-13  73.2
## 6897   2.30e-02  38.1
## 6898   6.48e-90 296.0
## 6899   3.86e-89 294.0
## 6900   1.93e-88 291.0
## 6901   1.74e-87 289.0
## 6902   2.34e-87 288.0
## 6903   3.35e-87 288.0
## 6904   6.14e-87 287.0
## 6905   7.59e-87 287.0
## 6906   2.56e-85 283.0
## 6907   3.04e-85 283.0
## 6908   7.52e-85 281.0
## 6909   1.24e-84 281.0
## 6910   1.77e-84 280.0
## 6911   3.58e-84 280.0
## 6912   3.87e-84 279.0
## 6913   4.51e-84 279.0
## 6914   5.57e-84 279.0
## 6915   1.02e-83 278.0
## 6916   1.91e-83 277.0
## 6917   2.86e-83 277.0
## 6918   4.01e-83 276.0
## 6919   9.64e-83 275.0
## 6920   1.15e-82 275.0
## 6921   1.47e-82 275.0
## 6922   3.00e-82 274.0
## 6923   5.40e-82 273.0
## 6924   5.72e-82 273.0
## 6925   1.60e-81 272.0
## 6926   4.40e-81 270.0
## 6927   6.34e-81 270.0
## 6928   2.17e-80 268.0
## 6929   3.69e-80 268.0
```

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## 6930   4.48e-80 268.0
## 6931   1.81e-79 266.0
## 6932   2.73e-79 265.0
## 6933   1.80e-78 263.0
## 6934   2.80e-78 263.0
## 6935   4.04e-78 262.0
## 6936   4.18e-77 259.0
## 6937   2.69e-71 242.0
## 6938   3.21e-70 239.0
## 6939   1.28e-45 168.0
## 6940   7.69e-90 290.0
## 6941   2.01e-87 283.0
## 6942   1.59e-86 281.0
## 6943   3.43e-86 280.0
## 6944   4.49e-86 280.0
## 6945   6.93e-86 279.0
## 6946   1.62e-85 278.0
## 6947   5.10e-85 277.0
## 6948   7.80e-85 276.0
## 6949   3.25e-84 275.0
## 6950   4.96e-84 274.0
## 6951   1.68e-83 273.0
## 6952   1.96e-83 273.0
## 6953   2.00e-83 273.0
## 6954   2.21e-83 272.0
## 6955   5.21e-83 271.0
## 6956   1.71e-82 270.0
## 6957   3.53e-81 266.0
## 6958   5.60e-81 266.0
## 6959   2.40e-76 253.0
## 6960   7.99e-90 270.0
## 6961   3.06e-78 240.0
## 6962   4.01e-77 238.0
## 6963   9.37e-90 294.0
## 6964   2.95e-89 293.0
## 6965   3.99e-89 292.0
## 6966   2.71e-88 290.0
## 6967   1.47e-87 288.0
## 6968   8.92e-87 286.0
## 6969   1.96e-85 282.0
## 6970   2.10e-85 282.0
## 6971   2.64e-85 281.0
## 6972   3.66e-85 281.0
## 6973   1.33e-84 280.0
## 6974   2.80e-84 279.0
## 6975   1.35e-83 277.0
## 6976   2.84e-83 276.0
## 6977   3.16e-83 276.0
## 6978   3.16e-83 276.0
## 6979   1.38e-82 274.0
## 6980   7.32e-82 272.0
## 6981   7.37e-80 266.0
## 6982   2.86e-73 248.0
## 6983   1.57e-71 243.0
```

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## 6984   9.50e-90 271.0
## 6985   1.51e-89 272.0
## 6986   1.08e-87 268.0
## 6987   1.48e-74 234.0
## 6988   1.66e-55 185.0
## 6989   1.84e-89 276.0
## 6990   5.01e-83 259.0
## 6991   9.53e-81 253.0
## 6992   2.28e-80 252.0
## 6993   4.11e-62 205.0
## 6994   2.92e-89 283.0
## 6995   7.00e-88 279.0
## 6996   3.40e-87 277.0
## 6997   6.72e-87 276.0
## 6998   3.09e-86 275.0
## 6999   4.48e-86 275.0
## 7000   6.36e-86 274.0
## 7001   6.64e-86 274.0
## 7002   1.06e-85 273.0
## 7003   2.39e-85 273.0
## 7004   2.76e-83 267.0
## 7005   4.44e-83 266.0
## 7006   5.54e-83 266.0
## 7007   1.65e-82 265.0
## 7008   8.57e-82 263.0
## 7009   1.02e-80 260.0
## 7010   2.79e-55 192.0
## 7011   3.51e-89 288.0
## 7012   5.05e-89 288.0
## 7013   5.32e-89 288.0
## 7014   9.12e-89 287.0
## 7015   3.64e-87 283.0
## 7016   5.42e-86 280.0
## 7017   8.11e-86 279.0
## 7018   9.18e-86 279.0
## 7019   2.05e-85 278.0
## 7020   2.71e-85 278.0
## 7021   3.27e-85 278.0
## 7022   3.62e-85 277.0
## 7023   4.32e-85 277.0
## 7024   6.73e-85 277.0
## 7025   1.12e-84 276.0
## 7026   2.03e-84 275.0
## 7027   2.77e-84 275.0
## 7028   3.25e-83 272.0
## 7029   6.83e-83 271.0
## 7030   2.01e-82 270.0
## 7031   1.05e-81 268.0
## 7032   6.36e-81 266.0
## 7033   3.53e-80 264.0
## 7034   1.11e-64 222.0
## 7035   5.21e-89 273.0
## 7036   1.44e-87 270.0
## 7037   2.29e-80 251.0
```

```
## 7038   4.17e-79 248.0
## 7039   7.52e-73 232.0
## 7040   3.41e-15  77.4
## 7041   5.21e-89 273.0
## 7042   1.44e-87 270.0
## 7043   2.29e-80 251.0
## 7044   4.17e-79 248.0
## 7045   7.52e-73 232.0
## 7046   3.41e-15  77.4
## 7047   5.21e-89 273.0
## 7048   1.44e-87 270.0
## 7049   2.29e-80 251.0
## 7050   4.17e-79 248.0
## 7051   7.52e-73 232.0
## 7052   3.41e-15  77.4
## 7053   5.21e-89 273.0
## 7054   1.44e-87 270.0
## 7055   2.29e-80 251.0
## 7056   4.17e-79 248.0
## 7057   7.52e-73 232.0
## 7058   3.41e-15  77.4
## 7059   5.97e-89 273.0
## 7060   4.32e-88 271.0
## 7061   1.25e-78 247.0
## 7062   1.46e-76 242.0
## 7063   7.92e-89 270.0
## 7064   3.37e-74 233.0
## 7065   6.84e-71 224.0
## 7066   8.46e-45 157.0
## 7067   3.95e-19  87.8
## 7068   7.92e-89 270.0
## 7069   3.37e-74 233.0
## 7070   6.84e-71 224.0
## 7071   8.46e-45 157.0
## 7072   3.95e-19  87.8
## 7073   7.92e-89 270.0
## 7074   3.37e-74 233.0
## 7075   6.84e-71 224.0
## 7076   8.46e-45 157.0
## 7077   3.95e-19  87.8
## 7078   7.92e-89 270.0
## 7079   3.37e-74 233.0
## 7080   6.84e-71 224.0
## 7081   8.46e-45 157.0
## 7082   3.95e-19  87.8
## 7083   7.92e-89 270.0
## 7084   3.37e-74 233.0
## 7085   6.84e-71 224.0
## 7086   8.46e-45 157.0
## 7087   3.95e-19  87.8
## 7088   7.92e-89 270.0
## 7089   3.37e-74 233.0
## 7090   6.84e-71 224.0
## 7091   8.46e-45 157.0
```

```
## 7092   3.95e-19  87.8
## 7093   7.92e-89 270.0
## 7094   3.37e-74 233.0
## 7095   6.84e-71 224.0
## 7096   8.46e-45 157.0
## 7097   3.95e-19  87.8
## 7098   7.92e-89 270.0
## 7099   3.37e-74 233.0
## 7100   6.84e-71 224.0
## 7101   8.46e-45 157.0
## 7102   3.95e-19  87.8
## 7103   1.22e-88 278.0
## 7104   1.54e-88 278.0
## 7105   9.20e-84 266.0
## 7106   6.56e-81 258.0
## 7107   3.71e-77 248.0
## 7108   4.39e-67 222.0
## 7109   1.70e-88 271.0
## 7110   5.00e-87 267.0
## 7111   1.50e-77 243.0
## 7112   5.63e-76 239.0
## 7113   2.08e-88 270.0
## 7114   1.11e-87 268.0
## 7115   3.00e-87 266.0
## 7116   1.05e-82 255.0
## 7117   2.67e-72 228.0
## 7118   2.31e-88 270.0
## 7119   1.30e-82 256.0
## 7120   5.73e-73 231.0
## 7121   2.00e-54 183.0
## 7122   2.43e-88 271.0
## 7123   2.41e-83 258.0
## 7124   2.54e-88 270.0
## 7125   4.49e-87 267.0
## 7126   1.53e-77 243.0
## 7127   5.22e-76 239.0
## 7128   4.11e-88 271.0
## 7129   8.48e-88 270.0
## 7130   1.36e-80 252.0
## 7131   4.79e-79 248.0
## 7132   2.89e-73 233.0
## 7133   4.03e-16  80.1
## 7134   4.89e-88 285.0
## 7135   8.57e-88 284.0
## 7136   1.97e-87 283.0
## 7137   1.40e-85 278.0
## 7138   4.28e-84 274.0
## 7139   3.68e-79 261.0
## 7140   8.02e-76 252.0
## 7141   2.85e-74 248.0
## 7142   5.89e-74 247.0
## 7143   3.91e-68 231.0
## 7144   6.05e-88 269.0
## 7145   2.63e-82 255.0
```

```
## 7146   1.48e-72 230.0
## 7147   2.09e-54 183.0
## 7148   6.32e-88 270.0
## 7149   7.41e-88 273.0
## 7150   5.55e-87 271.0
## 7151   3.54e-82 258.0
## 7152   2.99e-78 248.0
## 7153   5.02e-77 245.0
## 7154   3.35e-74 238.0
## 7155   1.50e-10  63.5
## 7156   7.59e-88 272.0
## 7157   2.22e-82 258.0
## 7158   8.91e-82 256.0
## 7159   1.53e-80 253.0
## 7160   4.91e-51 176.0
## 7161   3.34e-39 145.0
## 7162   7.85e-88 269.0
## 7163   3.17e-87 267.0
## 7164   1.05e-77 243.0
## 7165   5.63e-76 239.0
## 7166   7.99e-88 288.0
## 7167   5.68e-87 285.0
## 7168   1.63e-86 284.0
## 7169   8.22e-86 282.0
## 7170   7.61e-85 280.0
## 7171   8.50e-84 277.0
## 7172   1.08e-81 271.0
## 7173   1.36e-80 268.0
## 7174   1.38e-80 268.0
## 7175   5.63e-80 266.0
## 7176   1.15e-77 259.0
## 7177   7.10e-77 258.0
## 7178   3.42e-74 250.0
## 7179   4.01e-68 233.0
## 7180   2.76e-16  81.6
## 7181   5.90e-01  33.9
## 7182   9.54e-88 265.0
## 7183   1.38e-77 238.0
## 7184   1.13e-75 234.0
## 7185   1.03e-87 273.0
## 7186   5.32e-83 261.0
## 7187   2.54e-81 256.0
## 7188   1.17e-76 244.0
## 7189   1.63e-76 244.0
## 7190   1.57e-45 163.0
## 7191   2.27e-35 135.0
## 7192   2.55e-87 267.0
## 7193   9.38e-80 248.0
## 7194   2.71e-74 233.0
## 7195   3.17e-43 153.0
## 7196   4.32e-87 266.0
## 7197   2.29e-86 264.0
## 7198   1.21e-81 252.0
## 7199   4.68e-87 270.0
```

```
## 7200   3.62e-80 252.0
## 7201   1.72e-78 248.0
## 7202   4.49e-77 244.0
## 7203   2.02e-66 216.0
## 7204   6.27e-55 186.0
## 7205   3.85e-37 139.0
## 7206   2.82e-09  59.3
## 7207   8.13e-87 263.0
## 7208   2.63e-86 262.0
## 7209   7.50e-32 121.0
## 7210   8.66e-87 266.0
## 7211   8.52e-79 245.0
## 7212   8.30e-65 209.0
## 7213   3.48e-17  82.8
## 7214   1.29e-08  57.0
## 7215   8.91e-87 271.0
## 7216   3.59e-84 264.0
## 7217   9.74e-84 263.0
## 7218   2.83e-80 254.0
## 7219   1.41e-79 252.0
## 7220   3.74e-79 251.0
## 7221   1.32e-75 242.0
## 7222   2.04e-74 239.0
## 7223   2.35e-66 218.0
## 7224   2.68e-53 184.0
## 7225   1.20e-46 166.0
## 7226   1.02e-86 265.0
## 7227   6.04e-75 235.0
## 7228   3.96e-68 218.0
## 7229   2.35e-62 202.0
## 7230   1.03e-86 269.0
## 7231   5.24e-78 246.0
## 7232   5.96e-74 236.0
## 7233   1.31e-86 269.0
## 7234   2.03e-80 253.0
## 7235   8.74e-80 252.0
## 7236   1.78e-72 233.0
## 7237   6.86e-72 231.0
## 7238   2.05e-86 270.0
## 7239   5.53e-82 258.0
## 7240   2.33e-81 256.0
## 7241   2.18e-79 251.0
## 7242   3.47e-78 248.0
## 7243   4.79e-77 245.0
## 7244   1.86e-72 234.0
## 7245   2.11e-86 265.0
## 7246   1.37e-75 237.0
## 7247   1.47e-41 149.0
## 7248   2.38e-86 267.0
## 7249   2.42e-84 262.0
## 7250   2.51e-76 241.0
## 7251   1.66e-42 153.0
## 7252   6.94e-10  61.2
## 7253   3.52e-86 265.0
```

```
## 7254   1.73e-80 250.0
## 7255   3.66e-72 229.0
## 7256   4.27e-86 264.0
## 7257   4.50e-78 243.0
## 7258   7.29e-74 232.0
## 7259   4.79e-86 268.0
## 7260   3.84e-81 255.0
## 7261   5.90e-80 252.0
## 7262   1.02e-78 249.0
## 7263   1.86e-70 228.0
## 7264   9.70e-14  73.2
## 7265   4.80e-86 265.0
## 7266   1.01e-82 256.0
## 7267   2.06e-81 253.0
## 7268   7.88e-73 231.0
## 7269   5.23e-86 271.0
## 7270   9.62e-83 263.0
## 7271   2.28e-79 254.0
## 7272   1.47e-78 252.0
## 7273   6.13e-78 250.0
## 7274   6.35e-76 245.0
## 7275   2.43e-71 233.0
## 7276   3.06e-70 230.0
## 7277   4.88e-33 130.0
## 7278   5.33e-86 261.0
## 7279   2.77e-84 257.0
## 7280   4.34e-23  98.2
## 7281   7.18e-86 268.0
## 7282   3.66e-84 263.0
## 7283   9.84e-82 257.0
## 7284   4.16e-81 255.0
## 7285   2.27e-80 253.0
## 7286   5.91e-80 252.0
## 7287   2.16e-68 222.0
## 7288   1.61e-36 138.0
## 7289   1.30e-01  35.4
## 7290   7.45e-86 265.0
## 7291   3.50e-10  62.0
## 7292   3.32e-85 262.0
## 7293   3.09e-77 241.0
## 7294   3.79e-77 241.0
## 7295   3.32e-85 262.0
## 7296   3.09e-77 241.0
## 7297   3.79e-77 241.0
## 7298   3.32e-85 262.0
## 7299   3.09e-77 241.0
## 7300   3.79e-77 241.0
## 7301   3.39e-85 267.0
## 7302   1.30e-82 260.0
## 7303   2.34e-81 257.0
## 7304   1.20e-78 250.0
## 7305   1.83e-78 250.0
## 7306   1.07e-77 248.0
## 7307   1.48e-77 247.0
```

```
## 7308   5.00e-77 246.0
## 7309   1.39e-71 232.0
## 7310   5.52e-62 207.0
## 7311   3.32e-14  74.7
## 7312   5.33e-85 264.0
## 7313   7.52e-85 264.0
## 7314   1.27e-83 261.0
## 7315   9.09e-81 253.0
## 7316   1.26e-60 201.0
## 7317   5.33e-85 264.0
## 7318   7.52e-85 264.0
## 7319   1.27e-83 261.0
## 7320   9.09e-81 253.0
## 7321   1.26e-60 201.0
## 7322   5.65e-85 265.0
## 7323   2.37e-83 261.0
## 7324   7.50e-82 257.0
## 7325   5.75e-49 171.0
## 7326   1.34e-42 154.0
## 7327   7.97e-85 265.0
## 7328   3.97e-79 250.0
## 7329   7.78e-76 241.0
## 7330   2.99e-73 234.0
## 7331   5.20e-68 221.0
## 7332   2.10e-53 183.0
## 7333   8.49e-85 263.0
## 7334   7.70e-81 253.0
## 7335   9.87e-79 247.0
## 7336   4.18e-78 245.0
## 7337   4.90e-74 235.0
## 7338   1.02e-84 268.0
## 7339   1.39e-84 268.0
## 7340   2.36e-84 267.0
## 7341   1.69e-81 260.0
## 7342   5.47e-78 251.0
## 7343   5.01e-76 246.0
## 7344   4.19e-69 228.0
## 7345   4.32e-59 201.0
## 7346   1.09e-48 173.0
## 7347   2.77e-37 142.0
## 7348   2.37e-28 117.0
## 7349   1.03e-84 260.0
## 7350   1.03e-71 227.0
## 7351   6.02e-62 201.0
## 7352   1.21e-40 146.0
## 7353   1.06e-84 264.0
## 7354   1.07e-83 262.0
## 7355   1.53e-79 251.0
## 7356   2.88e-79 250.0
## 7357   2.51e-77 245.0
## 7358   7.53e-76 241.0
## 7359   4.28e-74 237.0
## 7360   2.26e-63 209.0
## 7361   1.40e-23 102.0
```

```
## 7362   1.18e-84 260.0
## 7363   1.23e-71 226.0
## 7364   7.15e-62 201.0
## 7365   1.33e-40 146.0
## 7366   1.35e-84 261.0
## 7367   7.30e-76 239.0
## 7368   2.12e-65 212.0
## 7369   1.72e-18  86.7
## 7370   1.35e-84 261.0
## 7371   7.30e-76 239.0
## 7372   2.12e-65 212.0
## 7373   1.72e-18  86.7
## 7374   1.90e-84 269.0
## 7375   2.47e-83 266.0
## 7376   7.99e-81 259.0
## 7377   1.77e-78 253.0
## 7378   9.74e-78 251.0
## 7379   1.49e-77 251.0
## 7380   2.99e-77 250.0
## 7381   7.76e-77 249.0
## 7382   2.41e-76 248.0
## 7383   2.15e-74 242.0
## 7384   5.53e-59 202.0
## 7385   2.51e-84 259.0
## 7386   1.28e-09  60.1
## 7387   2.51e-84 259.0
## 7388   1.28e-09  60.1
## 7389   2.51e-84 259.0
## 7390   1.28e-09  60.1
## 7391   2.51e-84 259.0
## 7392   1.28e-09  60.1
## 7393   2.55e-84 262.0
## 7394   4.54e-83 259.0
## 7395   1.42e-36 137.0
## 7396   2.70e-84 256.0
## 7397   2.79e-81 248.0
## 7398   2.11e-16  79.0
## 7399   3.24e-84 261.0
## 7400   4.46e-82 256.0
## 7401   2.58e-78 246.0
## 7402   2.91e-69 223.0
## 7403   1.67e-39 145.0
## 7404   3.24e-84 261.0
## 7405   4.46e-82 256.0
## 7406   2.58e-78 246.0
## 7407   2.91e-69 223.0
## 7408   1.67e-39 145.0
## 7409   3.94e-84 261.0
## 7410   3.84e-83 259.0
## 7411   5.35e-69 223.0
## 7412   4.52e-84 266.0
## 7413   8.16e-82 260.0
## 7414   1.37e-80 257.0
## 7415   8.40e-80 254.0
```

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## 7416   9.43e-76 244.0
## 7417   4.84e-84 262.0
## 7418   3.20e-81 255.0
## 7419   1.08e-73 236.0
## 7420   4.48e-73 234.0
## 7421   5.06e-84 254.0
## 7422   3.06e-74 230.0
## 7423   2.11e-73 228.0
## 7424   1.05e-53 177.0
## 7425   6.22e-84 258.0
## 7426   3.34e-81 251.0
## 7427   3.61e-72 228.0
## 7428   7.10e-59 193.0
## 7429   6.22e-84 258.0
## 7430   3.34e-81 251.0
## 7431   3.61e-72 228.0
## 7432   7.10e-59 193.0
## 7433   6.37e-84 259.0
## 7434   1.08e-82 256.0
## 7435   2.53e-80 249.0
## 7436   1.57e-79 248.0
## 7437   1.66e-33 128.0
## 7438   6.79e-84 260.0
## 7439   2.06e-81 253.0
## 7440   7.35e-80 249.0
## 7441   4.36e-72 229.0
## 7442   7.19e-65 211.0
## 7443   7.50e-63 206.0
## 7444   2.30e-21  95.1
## 7445   6.94e-84 262.0
## 7446   4.40e-79 250.0
## 7447   1.38e-77 246.0
## 7448   7.49e-76 241.0
## 7449   1.42e-52 181.0
## 7450   7.05e-84 270.0
## 7451   3.12e-80 261.0
## 7452   2.91e-79 258.0
## 7453   2.17e-77 253.0
## 7454   1.63e-75 248.0
## 7455   1.82e-75 248.0
## 7456   2.00e-75 248.0
## 7457   6.52e-73 241.0
## 7458   1.16e-69 233.0
## 7459   5.28e-69 231.0
## 7460   1.61e-66 224.0
## 7461   1.04e-51 184.0
## 7462   2.44e-33 132.0
## 7463   4.80e-02  37.0
## 7464   8.53e-84 260.0
## 7465   1.97e-82 257.0
## 7466   2.32e-80 251.0
## 7467   3.74e-80 251.0
## 7468   2.30e-61 202.0
## 7469   3.55e-33 128.0
```

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## 7470   1.14e-83 256.0
## 7471   1.16e-80 249.0
## 7472   1.37e-83 261.0
## 7473   2.33e-82 258.0
## 7474   3.38e-74 237.0
## 7475   5.24e-74 236.0
## 7476   1.37e-83 261.0
## 7477   2.33e-82 258.0
## 7478   3.38e-74 237.0
## 7479   5.24e-74 236.0
## 7480   1.66e-83 261.0
## 7481   8.18e-81 254.0
## 7482   6.99e-78 246.0
## 7483   4.57e-75 239.0
## 7484   6.92e-52 179.0
## 7485   1.07e-44 160.0
## 7486   7.68e-39 144.0
## 7487   2.17e-83 257.0
## 7488   2.37e-81 251.0
## 7489   1.61e-29 116.0
## 7490   3.18e-83 266.0
## 7491   5.87e-75 244.0
## 7492   1.27e-74 244.0
## 7493   2.21e-74 243.0
## 7494   1.19e-72 238.0
## 7495   4.46e-70 232.0
## 7496   1.33e-67 225.0
## 7497   2.00e-67 225.0
## 7498   3.00e-67 224.0
## 7499   3.55e-67 224.0
## 7500   4.55e-62 211.0
## 7501   3.52e-47 170.0
## 7502   8.68e-07  52.0
## 7503   3.72e-83 254.0
## 7504   5.21e-78 241.0
## 7505   3.48e-75 233.0
## 7506   1.21e-31 120.0
## 7507   7.60e-01  32.7
## 7508   4.61e-83 256.0
## 7509   4.20e-78 243.0
## 7510   6.59e-26 107.0
## 7511   1.84e-10  62.8
## 7512   5.65e-83 256.0
## 7513   3.79e-81 252.0
## 7514   3.12e-75 237.0
## 7515   2.39e-73 232.0
## 7516   1.80e-39 144.0
## 7517   5.90e-83 259.0
## 7518   7.57e-82 256.0
## 7519   4.58e-73 234.0
## 7520   1.23e-72 233.0
## 7521   7.52e-83 270.0
## 7522   4.11e-71 238.0
## 7523   2.02e-67 228.0
```

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## 7524   4.25e-65 222.0
## 7525   3.93e-40 152.0
## 7526   1.76e-33 132.0
## 7527   2.85e-33 132.0
## 7528   7.78e-83 258.0
## 7529   2.19e-82 256.0
## 7530   6.96e-80 250.0
## 7531   3.82e-79 248.0
## 7532   3.47e-61 202.0
## 7533   2.33e-32 125.0
## 7534   8.14e-83 255.0
## 7535   1.49e-80 249.0
## 7536   5.46e-80 248.0
## 7537   8.69e-83 255.0
## 7538   8.87e-83 258.0
## 7539   2.93e-79 248.0
## 7540   2.67e-78 246.0
## 7541   1.85e-28 115.0
## 7542   9.51e-83 264.0
## 7543   2.48e-81 261.0
## 7544   2.59e-80 258.0
## 7545   5.28e-80 257.0
## 7546   1.27e-79 256.0
## 7547   3.92e-79 255.0
## 7548   9.07e-79 254.0
## 7549   9.16e-79 254.0
## 7550   2.59e-76 247.0
## 7551   4.79e-76 247.0
## 7552   3.34e-72 236.0
## 7553   3.69e-34 134.0
## 7554   7.79e-12  67.8
## 7555   9.61e-83 259.0
## 7556   1.68e-80 253.0
## 7557   2.53e-80 253.0
## 7558   6.03e-79 249.0
## 7559   1.06e-71 231.0
## 7560   1.39e-46 165.0
## 7561   2.12e-37 140.0
## 7562   1.27e-82 255.0
## 7563   2.97e-68 218.0
## 7564   6.02e-59 194.0
## 7565   1.31e-82 256.0
## 7566   3.84e-79 247.0
## 7567   1.24e-65 213.0
## 7568   2.64e-50 172.0
## 7569   1.59e-82 259.0
## 7570   1.21e-79 251.0
## 7571   7.68e-79 249.0
## 7572   2.07e-76 243.0
## 7573   4.44e-70 226.0
## 7574   5.60e-69 224.0
## 7575   2.87e-60 201.0
## 7576   7.93e-55 187.0
## 7577   1.86e-82 254.0
```

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## 7578   1.06e-79 248.0
## 7579   5.15e-68 218.0
## 7580   7.02e-50 171.0
## 7581   2.35e-82 261.0
## 7582   5.00e-81 258.0
## 7583   1.11e-78 252.0
## 7584   2.08e-78 251.0
## 7585   8.22e-78 249.0
## 7586   2.80e-77 248.0
## 7587   1.37e-76 246.0
## 7588   2.49e-76 246.0
## 7589   4.31e-75 242.0
## 7590   5.93e-72 234.0
## 7591   1.46e-65 218.0
## 7592   1.62e-60 204.0
## 7593   2.36e-82 254.0
## 7594   9.18e-78 242.0
## 7595   1.40e-72 229.0
## 7596   8.79e-10  60.5
## 7597   8.50e-02  35.8
## 7598   2.58e-82 255.0
## 7599   5.53e-78 244.0
## 7600   4.31e-65 211.0
## 7601   1.39e-49 171.0
## 7602   2.70e-82 255.0
## 7603   3.80e-61 201.0
## 7604   2.43e-20  92.0
## 7605   7.00e-03  39.3
## 7606   3.29e-82 256.0
## 7607   2.41e-78 246.0
## 7608   6.37e-74 235.0
## 7609   2.27e-73 233.0
## 7610   3.72e-82 254.0
## 7611   4.79e-81 251.0
## 7612   8.40e-65 209.0
## 7613   1.10e-63 206.0
## 7614   1.30e+00  32.3
## 7615   3.72e-82 254.0
## 7616   4.79e-81 251.0
## 7617   8.40e-65 209.0
## 7618   1.10e-63 206.0
## 7619   1.30e+00  32.3
## 7620   4.32e-82 251.0
## 7621   2.84e-80 247.0
## 7622   2.05e-77 239.0
## 7623   1.97e-32 123.0
## 7624   5.31e-82 257.0
## 7625   6.52e-82 256.0
## 7626   1.62e-75 240.0
## 7627   4.08e-75 239.0
## 7628   1.33e-74 238.0
## 7629   1.15e-31 124.0
## 7630   5.71e-82 256.0
## 7631   7.63e-82 256.0
```

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## 7632   8.49e-77 243.0
## 7633   1.21e-67 219.0
## 7634   3.29e-67 218.0
## 7635   2.40e-59 198.0
## 7636   2.90e-01  34.3
## 7637   6.18e-82 252.0
## 7638   7.70e-69 218.0
## 7639   1.21e-66 213.0
## 7640   2.63e-56 186.0
## 7641   6.23e-82 257.0
## 7642   8.89e-82 256.0
## 7643   9.91e-77 243.0
## 7644   1.31e-67 220.0
## 7645   3.65e-67 219.0
## 7646   2.72e-59 198.0
## 7647   2.90e-01  34.3
## 7648   6.80e-82 257.0
## 7649   1.14e-81 256.0
## 7650   2.45e-81 255.0
## 7651   1.05e-80 254.0
## 7652   6.47e-18  85.9
## 7653   5.01e-10  62.0
## 7654   7.18e-82 256.0
## 7655   1.08e-81 256.0
## 7656   3.08e-80 252.0
## 7657   2.10e-78 247.0
## 7658   2.58e-46 164.0
## 7659   6.25e-38 141.0
## 7660   1.87e-12  69.3
## 7661   7.80e-82 255.0
## 7662   1.83e-79 249.0
## 7663   1.88e-78 246.0
## 7664   1.70e-70 226.0
## 7665   1.59e-30 120.0
## 7666   8.01e-82 257.0
## 7667   1.34e-81 256.0
## 7668   1.41e-78 248.0
## 7669   1.19e-76 243.0
## 7670   1.77e-76 243.0
## 7671   3.29e-57 193.0
## 7672   8.66e-82 254.0
## 7673   6.60e-80 249.0
## 7674   1.17e-61 202.0
## 7675   3.00e-03  40.8
## 7676   8.86e-82 254.0
## 7677   7.84e-79 246.0
## 7678   2.55e-65 211.0
## 7679   2.42e-50 172.0
## 7680   8.86e-82 254.0
## 7681   7.84e-79 246.0
## 7682   2.55e-65 211.0
## 7683   2.42e-50 172.0
## 7684   9.40e-82 252.0
## 7685   3.67e-71 225.0
```

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## 7686   1.72e-31 121.0
## 7687   8.83e-15  75.5
## 7688   1.03e-81 254.0
## 7689   1.12e-77 244.0
## 7690   2.34e-76 241.0
## 7691   2.39e-76 241.0
## 7692   3.31e-26 108.0
## 7693   1.03e-81 254.0
## 7694   1.12e-77 244.0
## 7695   2.34e-76 241.0
## 7696   2.39e-76 241.0
## 7697   3.31e-26 108.0
## 7698   1.06e-81 254.0
## 7699   5.10e-77 241.0
## 7700   2.80e-70 224.0
## 7701   7.16e-65 210.0
## 7702   1.06e-81 254.0
## 7703   5.10e-77 241.0
## 7704   2.80e-70 224.0
## 7705   7.16e-65 210.0
## 7706   1.06e-81 254.0
## 7707   5.10e-77 241.0
## 7708   2.80e-70 224.0
## 7709   7.16e-65 210.0
## 7710   1.06e-81 254.0
## 7711   5.10e-77 241.0
## 7712   2.80e-70 224.0
## 7713   7.16e-65 210.0
## 7714   1.22e-81 255.0
## 7715   2.54e-81 254.0
## 7716   2.46e-78 246.0
## 7717   3.18e-78 246.0
## 7718   6.91e-46 162.0
## 7719   3.75e-38 142.0
## 7720   1.24e-81 251.0
## 7721   1.19e-79 246.0
## 7722   2.25e-61 199.0
## 7723   2.00e-03  40.8
## 7724   1.48e-81 254.0
## 7725   3.60e-11  65.1
## 7726   1.49e-81 255.0
## 7727   8.64e-79 248.0
## 7728   2.10e-74 237.0
## 7729   1.24e-68 222.0
## 7730   1.32e-36 137.0
## 7731   1.72e-81 254.0
## 7732   4.04e-11  65.1
## 7733   1.84e-81 269.0
## 7734   1.00e-80 267.0
## 7735   1.72e-80 266.0
## 7736   2.47e-80 266.0
## 7737   2.38e-79 263.0
## 7738   3.35e-79 263.0
## 7739   9.33e-79 261.0
```

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## 7740   2.75e-78 260.0
## 7741   1.16e-77 258.0
## 7742   1.45e-77 258.0
## 7743   3.56e-77 257.0
## 7744   5.33e-77 256.0
## 7745   1.74e-76 255.0
## 7746   2.17e-76 255.0
## 7747   2.55e-76 254.0
## 7748   2.99e-76 254.0
## 7749   3.45e-76 254.0
## 7750   2.75e-75 252.0
## 7751   3.13e-75 251.0
## 7752   3.50e-75 251.0
## 7753   2.25e-72 244.0
## 7754   7.05e-66 226.0
## 7755   1.96e-81 254.0
## 7756   1.10e-77 244.0
## 7757   5.53e-75 238.0
## 7758   2.55e-74 236.0
## 7759   5.85e-49 170.0
## 7760   1.05e-36 137.0
## 7761   5.28e-12  67.8
## 7762   2.10e-81 253.0
## 7763   1.88e-78 245.0
## 7764   1.69e-65 212.0
## 7765   5.42e-50 172.0
## 7766   2.10e-81 253.0
## 7767   1.88e-78 245.0
## 7768   1.69e-65 212.0
## 7769   5.42e-50 172.0
## 7770   2.16e-81 258.0
## 7771   5.68e-76 244.0
## 7772   9.32e-74 238.0
## 7773   3.13e-52 181.0
## 7774   1.55e-32 128.0
## 7775   8.53e-04  42.4
## 7776   2.33e-81 256.0
## 7777   9.79e-75 239.0
## 7778   1.20e-74 239.0
## 7779   1.32e-71 231.0
## 7780   1.27e-64 213.0
## 7781   1.12e-60 202.0
## 7782   1.66e-38 144.0
## 7783   2.04e-22  99.0
## 7784   1.31e-17  84.7
## 7785   3.06e-81 254.0
## 7786   1.76e-77 244.0
## 7787   2.02e-77 244.0
## 7788   5.82e-70 224.0
## 7789   2.92e-49 171.0
## 7790   3.92e-38 141.0
## 7791   5.72e-29 116.0
## 7792   3.33e-81 255.0
## 7793   1.37e-78 248.0
```

```
## 7794   1.60e-78 248.0
## 7795   4.82e-78 247.0
## 7796   3.45e-71 229.0
## 7797   5.43e-56 190.0
## 7798   3.80e-81 254.0
## 7799   6.61e-80 251.0
## 7800   1.27e-79 250.0
## 7801   9.11e-65 212.0
## 7802   3.80e-81 254.0
## 7803   6.61e-80 251.0
## 7804   1.27e-79 250.0
## 7805   9.11e-65 212.0
## 7806   4.53e-81 254.0
## 7807   1.76e-80 253.0
## 7808   3.91e-79 249.0
## 7809   5.52e-78 246.0
## 7810   1.00e-45 162.0
## 7811   4.44e-37 139.0
## 7812   1.91e-12  69.3
## 7813   4.56e-81 255.0
## 7814   2.03e-79 251.0
## 7815   2.71e-79 250.0
## 7816   4.11e-78 247.0
## 7817   3.32e-69 224.0
## 7818   9.90e-62 205.0
## 7819   1.11e-55 189.0
## 7820   2.74e-13  72.0
## 7821   4.78e-81 253.0
## 7822   4.05e-77 243.0
## 7823   5.57e-72 230.0
## 7824   6.82e-81 253.0
## 7825   1.23e-71 229.0
## 7826   2.30e-71 228.0
## 7827   5.59e-45 159.0
## 7828   5.17e-38 141.0
## 7829   1.60e-13  72.4
## 7830   7.02e-81 253.0
## 7831   1.84e-76 241.0
## 7832   2.94e-55 186.0
## 7833   9.99e-27 110.0
## 7834   1.01e-10  63.9
## 7835   7.34e-81 252.0
## 7836   2.65e-63 206.0
## 7837   1.41e-51 176.0
## 7838   9.97e-41 147.0
## 7839   8.25e-81 258.0
## 7840   1.33e-78 253.0
## 7841   1.72e-77 250.0
## 7842   4.72e-77 249.0
## 7843   6.22e-77 248.0
## 7844   1.14e-75 245.0
## 7845   2.37e-75 244.0
## 7846   2.63e-74 241.0
## 7847   4.93e-73 238.0
```

```
## 7848   7.29e-73 238.0
## 7849   2.89e-71 233.0
## 7850   1.10e-67 224.0
## 7851   4.53e-67 223.0
## 7852   8.33e-81 251.0
## 7853   6.49e-77 241.0
## 7854   1.12e-74 236.0
## 7855   1.59e-74 235.0
## 7856   1.22e-49 171.0
## 7857   1.34e-39 144.0
## 7858   8.86e-81 253.0
## 7859   1.22e-80 253.0
## 7860   1.35e-77 245.0
## 7861   1.83e-77 245.0
## 7862   8.68e-47 165.0
## 7863   1.25e-38 143.0
## 7864   9.00e-81 249.0
## 7865   1.81e-64 208.0
## 7866   3.07e-22  96.7
## 7867   9.45e-81 251.0
## 7868   3.30e-79 247.0
## 7869   1.49e-65 212.0
## 7870   4.03e-50 172.0
## 7871   9.45e-81 251.0
## 7872   3.30e-79 247.0
## 7873   1.49e-65 212.0
## 7874   4.03e-50 172.0
## 7875   9.98e-81 249.0
## 7876   3.80e-76 238.0
## 7877   5.98e-44 155.0
## 7878   9.98e-81 249.0
## 7879   3.80e-76 238.0
## 7880   5.98e-44 155.0
## 7881   1.14e-80 250.0
## 7882   2.08e-61 201.0
## 7883   2.18e-37 138.0
## 7884   1.14e-80 250.0
## 7885   2.08e-61 201.0
## 7886   2.18e-37 138.0
## 7887   1.15e-80 252.0
## 7888   1.72e-80 252.0
## 7889   3.70e-77 243.0
## 7890   6.40e-77 243.0
## 7891   3.35e-45 160.0
## 7892   2.38e-37 139.0
## 7893   1.18e-80 256.0
## 7894   6.46e-80 254.0
## 7895   1.39e-78 251.0
## 7896   2.08e-77 248.0
## 7897   9.26e-77 246.0
## 7898   2.82e-74 239.0
## 7899   2.62e-71 232.0
## 7900   3.11e-71 231.0
## 7901   4.31e-57 194.0
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## 7902   6.35e-41 151.0
## 7903   7.34e-39 145.0
## 7904   1.84e-25 108.0
## 7905   1.23e-80 254.0
## 7906   2.02e-80 253.0
## 7907   5.49e-80 252.0
## 7908   2.03e-76 243.0
## 7909   2.20e-75 240.0
## 7910   9.68e-75 238.0
## 7911   1.61e-69 225.0
## 7912   3.88e-69 224.0
## 7913   5.35e-61 203.0
## 7914   5.22e-32 125.0
## 7915   4.86e-10  62.0
## 7916   1.47e-80 252.0
## 7917   1.53e-77 244.0
## 7918   7.17e-76 240.0
## 7919   1.71e-74 236.0
## 7920   2.82e-51 176.0
## 7921   2.75e-38 142.0
## 7922   1.52e-80 252.0
## 7923   3.83e-77 243.0
## 7924   5.72e-76 240.0
## 7925   1.68e-73 234.0
## 7926   8.20e-63 206.0
## 7927   1.62e-55 187.0
## 7928   3.61e-22  97.8
## 7929   1.52e-80 252.0
## 7930   3.83e-77 243.0
## 7931   5.72e-76 240.0
## 7932   1.68e-73 234.0
## 7933   8.20e-63 206.0
## 7934   1.62e-55 187.0
## 7935   3.61e-22  97.8
## 7936   1.52e-80 252.0
## 7937   3.83e-77 243.0
## 7938   5.72e-76 240.0
## 7939   1.68e-73 234.0
## 7940   8.20e-63 206.0
## 7941   1.62e-55 187.0
## 7942   3.61e-22  97.8
## 7943   1.56e-80 251.0
## 7944   6.47e-75 237.0
## 7945   2.83e-73 233.0
## 7946   3.07e-54 183.0
## 7947   6.34e-45 159.0
## 7948   2.11e-08  56.6
## 7949   1.65e-80 252.0
## 7950   2.87e-79 249.0
## 7951   3.20e-79 249.0
## 7952   3.42e-77 244.0
## 7953   1.56e-75 239.0
## 7954   3.68e-64 210.0
## 7955   1.78e-80 266.0
```

```
## 7956   1.15e-79 263.0
## 7957   1.81e-79 263.0
## 7958   2.20e-79 263.0
## 7959   2.22e-79 263.0
## 7960   1.75e-78 260.0
## 7961   4.50e-78 259.0
## 7962   1.67e-77 258.0
## 7963   4.28e-77 256.0
## 7964   4.83e-77 256.0
## 7965   1.19e-76 255.0
## 7966   2.55e-76 254.0
## 7967   5.90e-76 253.0
## 7968   5.96e-76 253.0
## 7969   5.20e-71 240.0
## 7970   3.67e-70 237.0
## 7971   1.70e-64 222.0
## 7972   5.05e-63 218.0
## 7973   4.56e-62 215.0
## 7974   3.70e-60 209.0
## 7975   1.57e-58 205.0
## 7976   5.33e-53 189.0
## 7977   1.29e-48 176.0
## 7978   1.88e-80 250.0
## 7979   3.38e-42 151.0
## 7980   1.63e-23 100.0
## 7981   2.00e-03  41.2
## 7982   1.93e-80 250.0
## 7983   3.87e-42 151.0
## 7984   1.59e-23 100.0
## 7985   2.00e-03  41.2
## 7986   1.98e-80 251.0
## 7987   1.85e-73 234.0
## 7988   6.49e-70 224.0
## 7989   6.48e-47 164.0
## 7990   1.04e-38 143.0
## 7991   5.27e-12  67.8
## 7992   2.19e-80 253.0
## 7993   1.51e-77 246.0
## 7994   5.19e-70 226.0
## 7995   2.82e-67 219.0
## 7996   1.81e-64 212.0
## 7997   2.89e-45 162.0
## 7998   5.77e-10  61.6
## 7999   2.33e-80 252.0
## 8000   4.36e-76 241.0
## 8001   2.92e-71 229.0
## 8002   3.13e-69 223.0
## 8003   8.30e-63 207.0
## 8004   1.91e-59 198.0
## 8005   1.13e-23 102.0
## 8006   2.36e-80 252.0
## 8007   3.55e-80 252.0
## 8008   1.13e-76 243.0
## 8009   2.31e-76 242.0
```

```
## 8010   2.13e-45 161.0
## 8011   5.40e-37 139.0
## 8012   2.52e-80 249.0
## 8013   9.58e-74 232.0
## 8014   9.07e-61 198.0
## 8015   2.06e-34 129.0
## 8016   6.67e-31 120.0
## 8017   2.60e+00  31.2
## 8018   2.52e-80 249.0
## 8019   9.58e-74 232.0
## 8020   9.07e-61 198.0
## 8021   2.06e-34 129.0
## 8022   6.67e-31 120.0
## 8023   2.60e+00  31.2
## 8024   2.55e-80 254.0
## 8025   1.98e-76 244.0
## 8026   4.03e-75 241.0
## 8027   1.58e-74 239.0
## 8028   1.15e-53 185.0
## 8029   2.91e-80 261.0
## 8030   4.73e-79 258.0
## 8031   5.36e-77 252.0
## 8032   1.21e-75 248.0
## 8033   3.15e-75 247.0
## 8034   9.04e-75 246.0
## 8035   2.31e-72 240.0
## 8036   1.24e-71 238.0
## 8037   2.34e-71 237.0
## 8038   4.42e-70 234.0
## 8039   1.01e-69 233.0
## 8040   3.02e-68 229.0
## 8041   4.93e-67 226.0
## 8042   1.29e-63 216.0
## 8043   1.99e-38 146.0
## 8044   3.16e-09  59.7
## 8045   3.58e-80 248.0
## 8046   7.80e-70 221.0
## 8047   7.11e-48 164.0
## 8048   3.79e-80 249.0
## 8049   1.52e-73 232.0
## 8050   1.64e-46 162.0
## 8051   4.72e-30 118.0
## 8052   1.00e-02  38.9
## 8053   4.75e-80 249.0
## 8054   5.77e-74 233.0
## 8055   1.46e-47 165.0
## 8056   5.27e-80 249.0
## 8057   1.61e-77 243.0
## 8058   8.65e-65 210.0
## 8059   2.42e-47 165.0
## 8060   5.40e-80 246.0
## 8061   1.67e-75 234.0
## 8062   3.47e-74 231.0
## 8063   4.34e-70 221.0
```

```
## 8064   1.05e-47 163.0
## 8065   6.14e-80 249.0
## 8066   3.29e-68 219.0
## 8067   3.89e-67 216.0
## 8068   2.24e-63 206.0
## 8069   1.98e-38 141.0
## 8070   7.10e-27 110.0
## 8071   5.03e-25 105.0
## 8072   4.90e+00  30.4
## 8073   6.41e-80 254.0
## 8074   4.79e-78 249.0
## 8075   3.48e-74 239.0
## 8076   5.27e-72 234.0
## 8077   9.67e-69 225.0
## 8078   1.36e-68 225.0
## 8079   1.91e-65 217.0
## 8080   7.30e-64 213.0
## 8081   1.28e-42 156.0
## 8082   6.56e-80 254.0
## 8083   5.28e-78 249.0
## 8084   3.40e-74 240.0
## 8085   4.67e-72 234.0
## 8086   9.02e-69 226.0
## 8087   1.44e-68 225.0
## 8088   3.71e-67 221.0
## 8089   7.08e-64 213.0
## 8090   3.05e-47 169.0
## 8091   1.25e-42 156.0
## 8092   5.79e-15  77.0
## 8093   6.90e-80 249.0
## 8094   8.83e-79 246.0
## 8095   1.10e-65 213.0
## 8096   4.69e-51 174.0
## 8097   7.07e-80 249.0
## 8098   2.90e-69 222.0
## 8099   3.69e-67 216.0
## 8100   2.29e-32 125.0
## 8101   1.70e-25 106.0
## 8102   1.10e+00  32.3
## 8103   7.75e-80 247.0
## 8104   3.01e-70 223.0
## 8105   8.63e-80 249.0
## 8106   8.31e-72 228.0
## 8107   7.86e-52 177.0
## 8108   9.70e-42 150.0
## 8109   8.71e-80 253.0
## 8110   9.26e-77 245.0
## 8111   3.87e-68 223.0
## 8112   3.21e-66 218.0
## 8113   4.33e-66 218.0
## 8114   5.13e-65 215.0
## 8115   9.28e-44 158.0
## 8116   1.06e-79 266.0
## 8117   1.54e-76 257.0
```

```
## 8118   1.60e-75 254.0
## 8119   4.90e-75 253.0
## 8120   1.74e-74 251.0
## 8121   5.31e-74 250.0
## 8122   8.46e-73 246.0
## 8123   3.47e-70 239.0
## 8124   5.52e-70 238.0
## 8125   1.40e-69 237.0
## 8126   2.14e-67 231.0
## 8127   7.72e-67 229.0
## 8128   1.30e-66 229.0
## 8129   1.74e-63 219.0
## 8130   4.07e-57 201.0
## 8131   5.27e-57 201.0
## 8132   2.94e-55 196.0
## 8133   4.89e-55 195.0
## 8134   3.90e-54 192.0
## 8135   2.61e-50 182.0
## 8136   2.09e-46 170.0
## 8137   5.20e-15  77.8
## 8138   4.67e-08  56.2
## 8139   1.21e-79 249.0
## 8140   1.13e-71 229.0
## 8141   2.90e-70 225.0
## 8142   1.95e-46 163.0
## 8143   2.31e-38 142.0
## 8144   3.48e-13  71.2
## 8145   1.32e-79 254.0
## 8146   1.54e-76 246.0
## 8147   2.72e-72 235.0
## 8148   2.55e-67 222.0
## 8149   8.51e-67 221.0
## 8150   2.36e-63 212.0
## 8151   3.45e-38 144.0
## 8152   1.58e-24 105.0
## 8153   1.35e-79 248.0
## 8154   5.77e-73 231.0
## 8155   6.44e-72 228.0
## 8156   1.02e-57 192.0
## 8157   3.76e-50 172.0
## 8158   2.73e-32 125.0
## 8159   1.40e-79 249.0
## 8160   1.00e-77 244.0
## 8161   6.47e-76 240.0
## 8162   5.67e-70 224.0
## 8163   7.91e-52 177.0
## 8164   1.40e-79 248.0
## 8165   5.07e-72 229.0
## 8166   1.41e-51 176.0
## 8167   2.31e-41 149.0
## 8168   1.44e-79 251.0
## 8169   1.79e-71 230.0
## 8170   1.96e-65 215.0
## 8171   1.09e-51 179.0
```

```
## 8172   2.54e-51 178.0
## 8173   3.52e-40 148.0
## 8174   1.53e-79 248.0
## 8175   4.94e-73 231.0
## 8176   1.24e-06  51.2
## 8177   1.55e-79 247.0
## 8178   2.84e-78 244.0
## 8179   5.54e-75 235.0
## 8180   1.02e-73 232.0
## 8181   4.05e-58 192.0
## 8182   1.64e-79 249.0
## 8183   3.45e-73 233.0
## 8184   2.54e-71 228.0
## 8185   8.66e-46 162.0
## 8186   1.14e-37 140.0
## 8187   1.04e-13  72.8
## 8188   1.66e-79 249.0
## 8189   1.01e-73 234.0
## 8190   9.24e-72 229.0
## 8191   5.11e-66 214.0
## 8192   2.13e-47 166.0
## 8193   5.47e-39 144.0
## 8194   9.38e-17  82.0
## 8195   4.68e-12  67.8
## 8196   1.81e-79 248.0
## 8197   3.79e-71 226.0
## 8198   5.02e-69 221.0
## 8199   4.45e-53 179.0
## 8200   5.91e-39 142.0
## 8201   1.94e-79 248.0
## 8202   1.86e-71 228.0
## 8203   7.86e-52 177.0
## 8204   9.70e-42 150.0
## 8205   1.94e-79 248.0
## 8206   1.86e-71 228.0
## 8207   7.86e-52 177.0
## 8208   9.70e-42 150.0
## 8209   2.09e-79 247.0
## 8210   1.91e-60 198.0
## 8211   7.15e-37 137.0
## 8212   7.50e-01  33.1
## 8213   2.11e-79 250.0
## 8214   2.03e-71 229.0
## 8215   2.35e-65 214.0
## 8216   1.50e-51 177.0
## 8217   2.24e-51 177.0
## 8218   4.67e-40 147.0
## 8219   2.88e-79 248.0
## 8220   1.13e-70 226.0
## 8221   1.65e-50 173.0
## 8222   2.89e-79 247.0
## 8223   3.05e-79 259.0
## 8224   7.22e-79 258.0
## 8225   7.69e-79 258.0
```

```
## 8226   1.05e-78 258.0
## 8227   8.94e-78 255.0
## 8228   1.20e-77 255.0
## 8229   2.05e-77 254.0
## 8230   2.28e-76 251.0
## 8231   2.38e-76 251.0
## 8232   1.37e-75 249.0
## 8233   4.72e-74 245.0
## 8234   4.59e-73 243.0
## 8235   1.39e-65 223.0
## 8236   8.04e-65 221.0
## 8237   9.66e-64 218.0
## 8238   2.36e-63 216.0
## 8239   2.64e-63 216.0
## 8240   2.42e-47 172.0
## 8241   3.16e-79 264.0
## 8242   6.61e-75 252.0
## 8243   1.07e-74 251.0
## 8244   2.84e-74 250.0
## 8245   9.36e-74 249.0
## 8246   5.24e-73 246.0
## 8247   2.35e-72 245.0
## 8248   1.67e-71 242.0
## 8249   2.99e-71 241.0
## 8250   5.12e-71 241.0
## 8251   5.76e-71 241.0
## 8252   1.68e-69 237.0
## 8253   4.47e-69 235.0
## 8254   4.88e-69 235.0
## 8255   9.70e-66 226.0
## 8256   1.84e-60 211.0
## 8257   5.02e-51 184.0
## 8258   3.62e-79 249.0
## 8259   1.54e-76 243.0
## 8260   3.13e-75 239.0
## 8261   2.73e-72 231.0
## 8262   1.73e-46 164.0
## 8263   3.67e-79 247.0
## 8264   9.91e-76 238.0
## 8265   1.31e-67 218.0
## 8266   1.12e-47 166.0
## 8267   2.09e-29 117.0
## 8268   2.18e-19  89.4
## 8269   6.30e+00  30.0
## 8270   3.76e-79 247.0
## 8271   1.45e-78 246.0
## 8272   9.68e-70 223.0
## 8273   1.87e-66 214.0
## 8274   1.28e-46 163.0
## 8275   1.35e-38 142.0
## 8276   3.94e-79 248.0
## 8277   7.62e-79 247.0
## 8278   3.68e-71 227.0
## 8279   6.90e-50 172.0
```

```
## 8280   6.76e-49 169.0
## 8281   4.13e-79 248.0
## 8282   1.24e-72 231.0
## 8283   1.33e-58 194.0
## 8284   9.29e-56 187.0
## 8285   2.69e-45 160.0
## 8286   1.37e-16  81.3
## 8287   4.24e-79 248.0
## 8288   4.43e-71 228.0
## 8289   4.58e-71 228.0
## 8290   9.22e-46 161.0
## 8291   7.57e-38 140.0
## 8292   4.41e-79 248.0
## 8293   6.89e-77 243.0
## 8294   1.78e-71 229.0
## 8295   9.04e-48 167.0
## 8296   1.00e-03  41.6
## 8297   4.47e-79 248.0
## 8298   4.67e-79 246.0
## 8299   3.15e-67 216.0
## 8300   5.42e-61 200.0
## 8301   4.92e-51 174.0
## 8302   4.76e-79 246.0
## 8303   1.73e-64 209.0
## 8304   2.77e-55 185.0
## 8305   1.42e-26 108.0
## 8306   8.54e-20  90.1
## 8307   6.42e-18  84.7
## 8308   4.40e-01  33.9
## 8309   4.76e-79 246.0
## 8310   1.73e-64 209.0
## 8311   2.77e-55 185.0
## 8312   1.42e-26 108.0
## 8313   8.54e-20  90.1
## 8314   6.42e-18  84.7
## 8315   4.40e-01  33.9
## 8316   5.31e-79 246.0
## 8317   8.44e-69 220.0
## 8318   8.06e-50 171.0
## 8319   6.24e-79 246.0
## 8320   1.24e-68 219.0
## 8321   6.59e-56 186.0
## 8322   6.95e-50 171.0
## 8323   1.78e-39 144.0
## 8324   1.10e-13  72.4
## 8325   8.12e-79 247.0
## 8326   8.43e-79 245.0
## 8327   2.75e-72 228.0
## 8328   3.46e-53 179.0
## 8329   2.40e-11  65.5
## 8330   8.79e-79 246.0
## 8331   1.95e-74 234.0
## 8332   7.80e-46 160.0
## 8333   8.79e-79 246.0
```

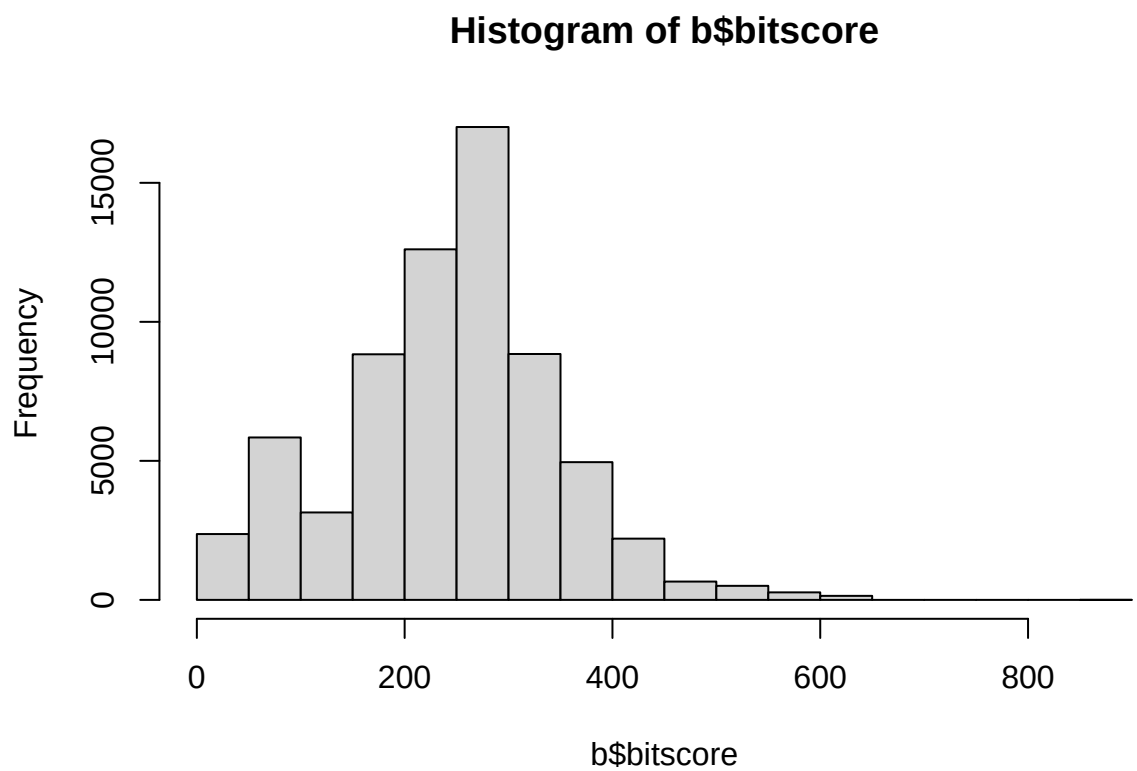
```
##  [ reached 'max' / getOption("max.print") -- omitted 59053 rows ]
```

Setting the column names for the file

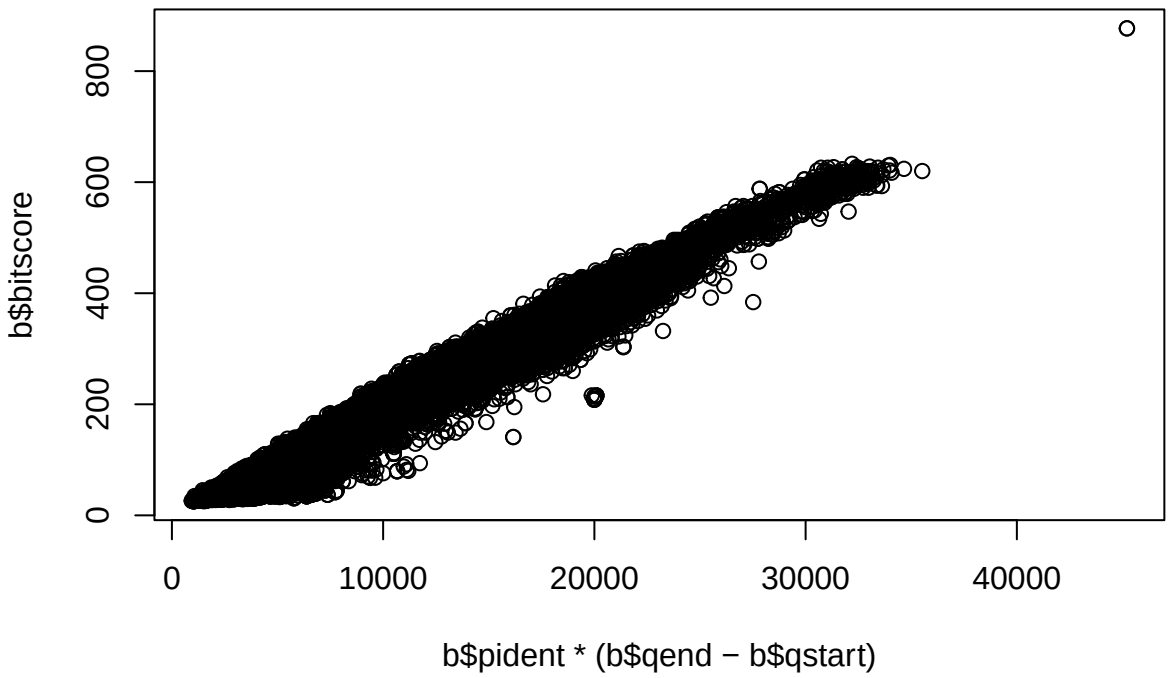
```
colnames(b) <- c("qseqid", "sseqid", "pident", "length", "mismatch", "gapopen", "qstart", "qend", "ssta
```

Making a histogram of the $bitscore values

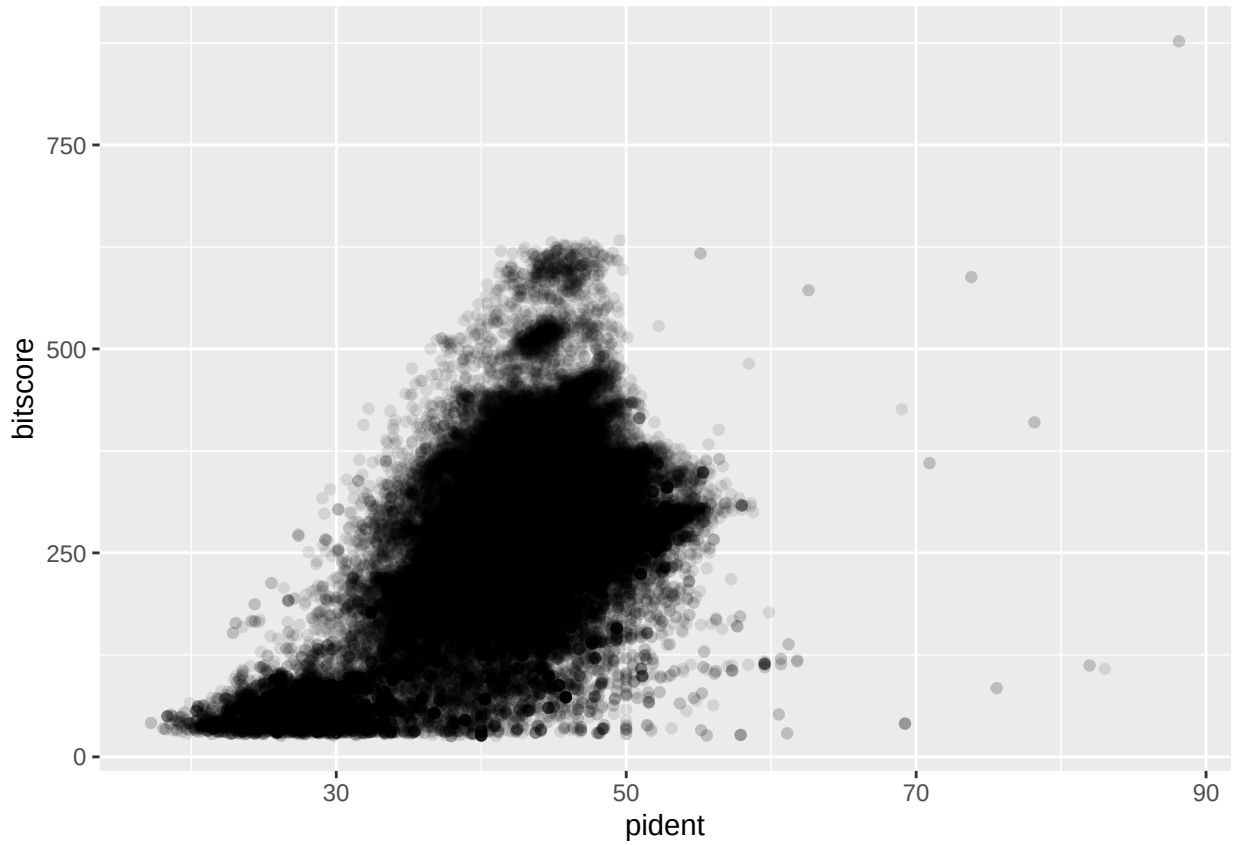
```
hist(b$bitscore, breaks = 30)
```




```
## Asuming your blast results are stored in an object called 'b'
plot(b$pident  * (b$qend - b$qstart), b$bitscore)
```




```
library(ggplot2)
ggplot(b, aes(pident, bitscore)) + geom_point(alpha=0.1)
```




```
ggplot(b, aes((b$pident * (b$qend - b$qstart)), bitscore)) + geom_point(alpha=0.1) + geom_smooth()
```

```
## Warning: Use of `b$pident` is discouraged. Use `pident` instead.

## Warning: Use of `b$qend` is discouraged. Use `qend` instead.

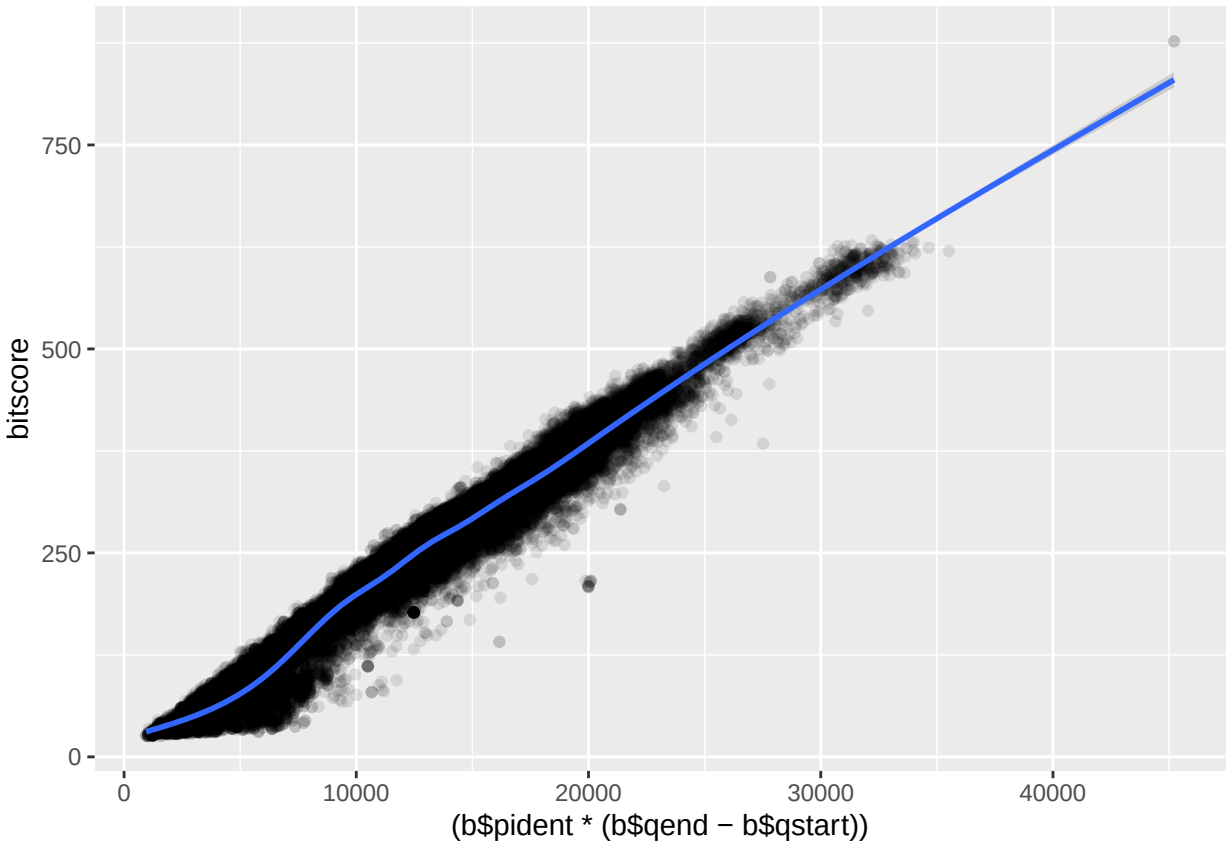
## Warning: Use of `b$qstart` is discouraged. Use `qstart` instead.

## Warning: Use of `b$pident` is discouraged. Use `pident` instead.

## Warning: Use of `b$qend` is discouraged. Use `qend` instead.

## Warning: Use of `b$qstart` is discouraged. Use `qstart` instead.

## `geom_smooth()` using method = 'gam' and formula 'y ~ s(x, bs = "cs")'
```


bitscore
750
500
250
0
0
10000
20000
30000
40000
(b$pident * (b$qend − b$qstart))