Adding marker 3086 (chrC05_4824981)

Adding marker 3089 (chrC05_6013764)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3060 (chrC05_2369110)

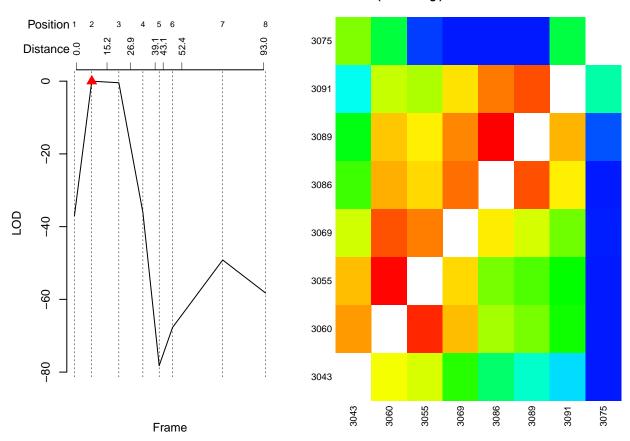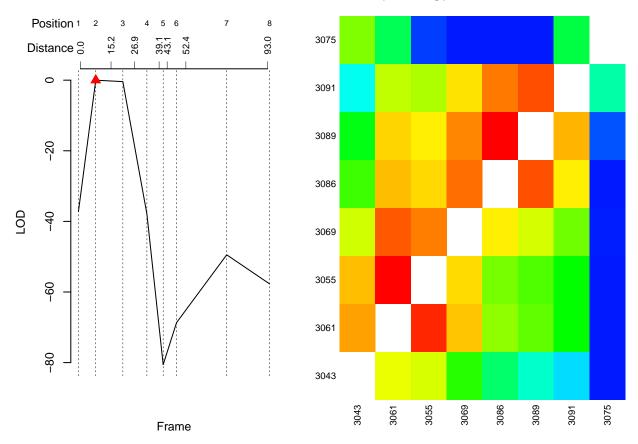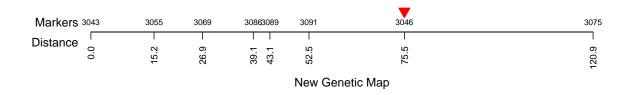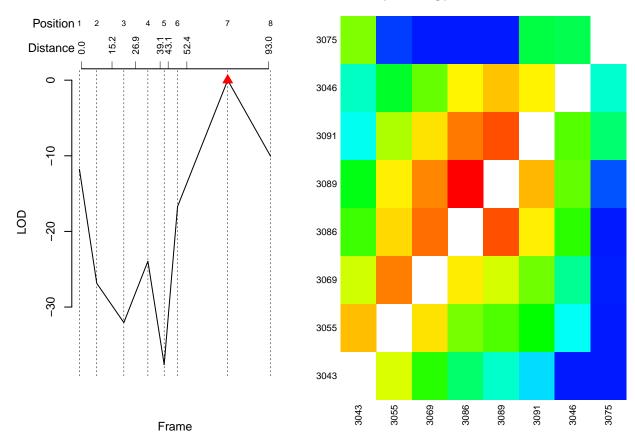LOD (above diag.) and Recombination Fraction Matrix
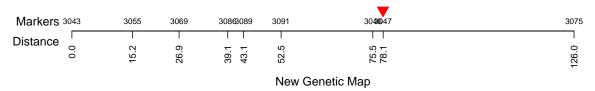
Adding marker 3061 (chrC05_2369143)

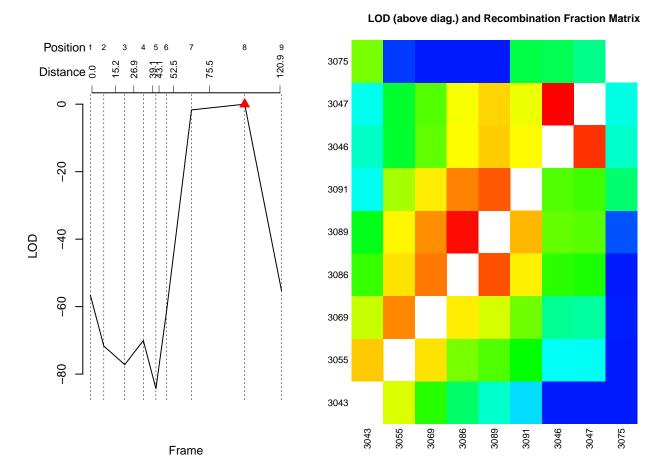**Adding marker 3046 (chrC05_12925667)**

Adding marker 3047 (chrC05_13116997)

Markers 3043   3055   3069   3086 3089   3091   3046 3047   3075

Distance 0.0   15.2   26.9   39.1 43.1   52.5   75.5 78.1   126.0

New Genetic Map

Position 1 2   3   4 5 6   7   8   9

Distance 0.0   15.2 26.9 39.1 52.5   75.5   120.9
                    43.1

LOD

Frame

LOD (above diag.) and Recombination Fraction Matrix
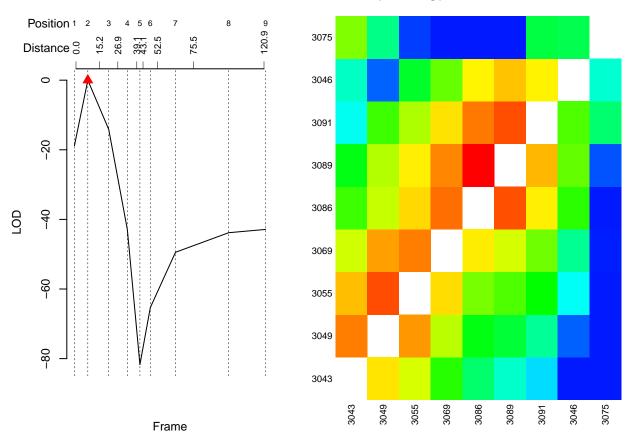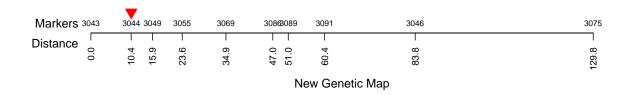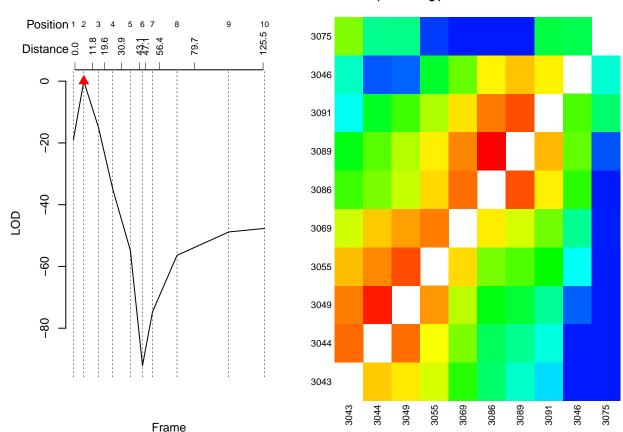
Adding marker 3049 (chrC05_1534319)

Markers 3043   3049   3055   3069   3086 3089   3091   3046   3075

Distance 0.0   11.8   19.6   30.9   43.1 47.1   56.4   79.7   125.5

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2   3   4 5 6   7   8   9

Distance 0.0 15.2 26.9 39.1 52.5   75.5   120.9

LOD

Frame
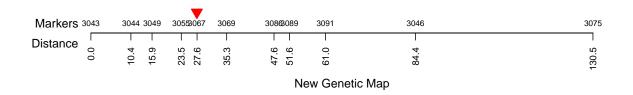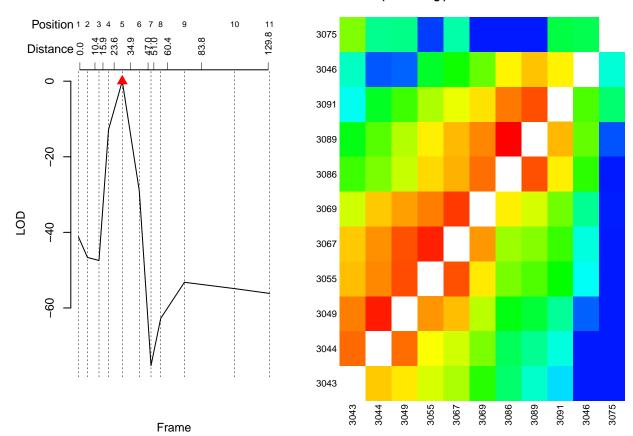
Adding marker 3044 (chrC05_1057044)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix
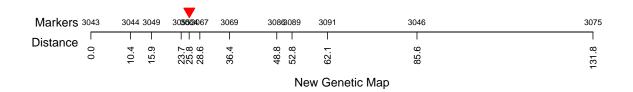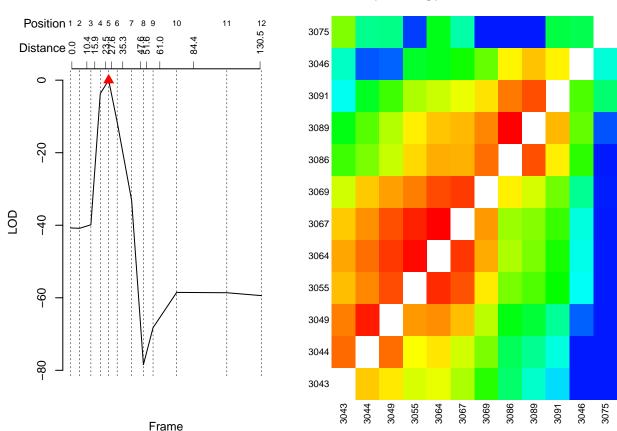
Adding marker 3067 (chrC05_2583009)

LOD (above diag.) and Recombination Fraction Matrix
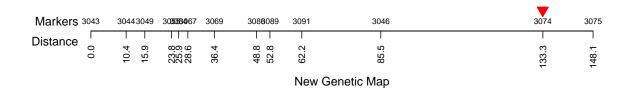
Adding marker 3064 (chrC05_2370374)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix
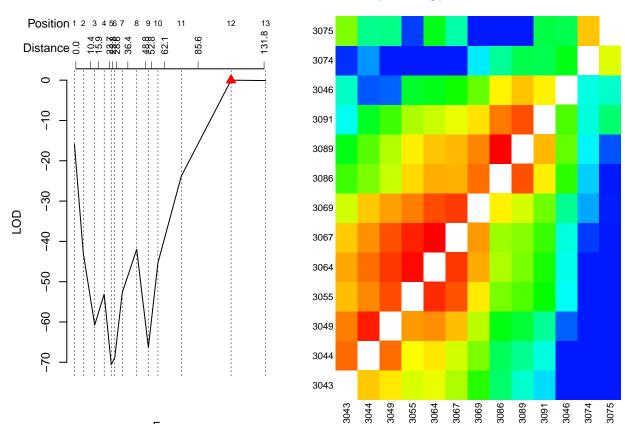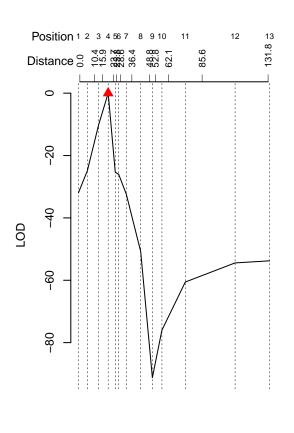
Adding marker 3074 (chrC05_40796399)

LOD (above diag.) and Recombination Fraction Matrix
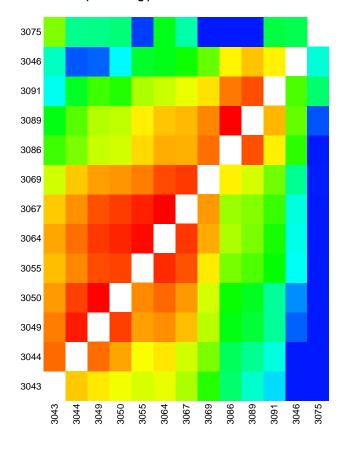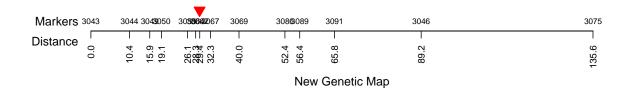
Adding marker 3050 (chrC05_1577892)

Markers

| 3043 | 3044 3045 3050 3056563067 3069 3086089 3091 | 3046 | 3075 |

Distance

0.0 10.4 15.9 19.1 26.0 28.2 31.0 38.8 51.2 55.2 64.5 88.0 134.3

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 56 7 8 9 10 11 12 13

Distance 0.0 10.4 15.9 26.7 28.0 36.4 48.8 52.8 62.1 85.6 131.8

LOD

Frame

Adding marker 3062 (chrC05_2369805)

Markers
3043   3044 3049 3050   3055 3062 3067   3069   3086 3089   3091   3046   3075

Distance
0.0   10.4   15.9 19.1   26.1 29.3 32.3   40.0   52.4 56.4   65.8   89.2   135.6

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position
1 2   3 4 5 6 7 8   9 10 11   12   13   14

Distance
0.0   10.4 15.9 19.1   26.0 31.0   38.8   51.2 55.2 64.5   88.0   134.3

LOD

Frame

Adding marker 3084 (chrC05_4824452)

Markers: 3043, 3044, 3049, 3050, 3055, 3064, 3067, 3069, 3084, 3086, 3089, 3091, 3046, 3075

Distance: 0.0, 10.4, 15.9, 19.1, 26.1, 28.2, 31.0, 38.7, 51.7, 53.3, 57.3, 66.7, 90.1, 136.5

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Distance: 0.0, 10.4, 15.9, 19.1, 26.1, 28.2, 31.0, 38.8, 51.2, 55.2, 64.5, 88.0, 134.3

LOD

Frame

Adding marker 3088 (chrC05_6013739)

Markers | 3043 | 3044 3049 3050 3055 3064 3067 3069 3086 3089 3088 3091 | 3046 | 3075

Distance | 0.0 | 10.4 15.9 19.1 26.1 28.2 31.0 38.8 51.2 56.5 66.1 89.3 | 135.7

New Genetic Map

Position | 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Distance | 0.0 10.4 15.9 19.1 26.1 28.2 31.0 38.8 51.2 55.2 64.5 88.0 134.3

LOD

Frame

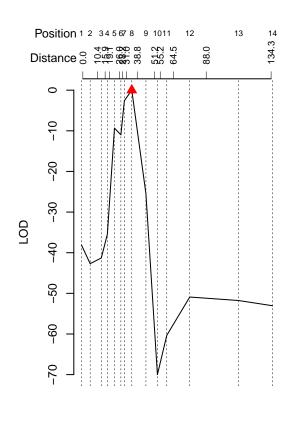## LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3063 (chrC05_2369817)

Adding marker 3066 (chrC05_2582920)

Markers: 3043, 3044, 3049, 3050, 3055, 3064, 3067, 3066, 3069, 3086, 3089, 3091, 3046, 3075

Distance: 0.0, 10.4, 15.9, 19.1, 26.1, 28.2, 31.0, 33.7, 41.3, 53.7, 57.7, 67.0, 90.5, 136.9

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Distance: 0.0, 10.4, 15.9, 19.1, 26.1, 28.2, 31.0, 38.8, 51.2, 55.2, 64.5, 88.0, 134.3

LOD

Frame
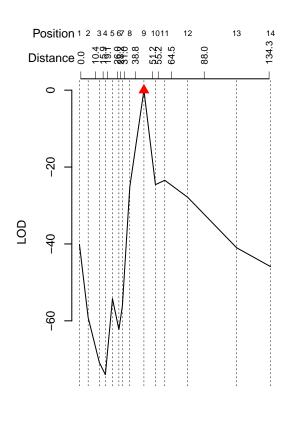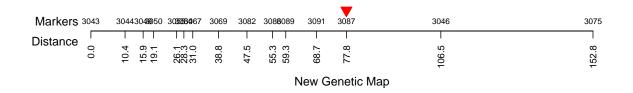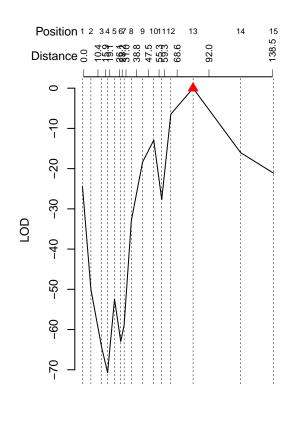
Adding marker 3077 (chrC05_41517654)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3082 (chrC05_4351303)

Markers: 3043, 3044, 3049, 3050, 3055, 3056, 3064, 3067, 3069, 3082, 3086, 3089, 3091, 3046, 3075

Distance: 0.0, 10.4, 15.9, 19.1, 26.1, 28.2, 31.0, 38.8, 47.5, 55.3, 59.3, 68.6, 92.0, 138.5

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Distance: 0.0, 10.4, 15.9, 19.1, 26.1, 31.0, 38.8, 51.2, 55.2, 64.5, 88.0, 134.3

LOD
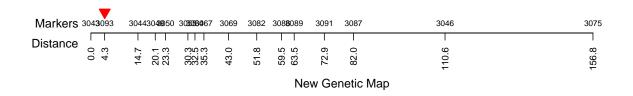
Frame
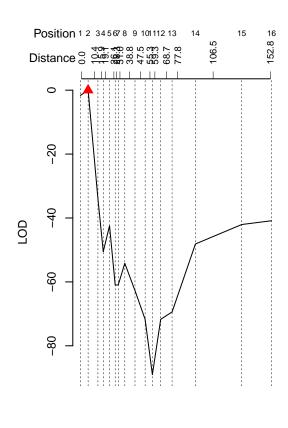
Adding marker 3087 (chrC05_4825391)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3093 (chrC05_921623)

Markers 3043 3093 3044 3049 3050 3055 3064 3067 3069 3082 3086 3089 3091 3087 3046 3075

Distance 0.0 4.3 14.7 20.1 23.3 30.3 32.5 35.3 43.0 51.8 59.5 63.5 72.9 82.0 110.6 156.8

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Distance 0.0 10.4 19.1 26.1 31.3 38.8 47.5 55.3 68.7 77.8 106.5 152.8

LOD

Frame

Adding marker 3072 (chrC05_3947678)

Markers 3043 3044 3043 3050 3055 3067 3069 3072 3082 3086 3089 3091 3087 3046 3075

Distance 0.0 10.4 15.9 19.1 26.1 28.3 31.0 38.6 46.6 53.3 60.9 64.9 74.4 83.5 112.1 158.3

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 34 567 8 9 10 11 12 13 14 15 16

Distance 0.0 10.4 19.1 26.1 31.0 38.8 47.5 55.3 68.7 77.8 106.5 152.8

LOD

Frame

Adding marker 3083 (chrC05_4822984)

Markers: 3043, 3044, 3040, 3049, 3050, 3055, 3064, 3067, 3069, 3072, 3082, 3086, 3089, 3091, 3083, 3087, 3046, 3075

Distance: 0.0, 10.4, 15.9, 19.1, 26.1, 28.3, 31.0, 38.6, 46.6, 53.3, 60.9, 64.9, 73.7, 82.6, 88.2, 116.4, 162.6

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

Distance: 0.0, 10.4, 19.1, 38.1, 38.6, 46.6, 53.3, 60.9, 74.4, 83.5, 112.1, 158.3

LOD

Frame

Adding marker 3045 (chrC05_1167217)

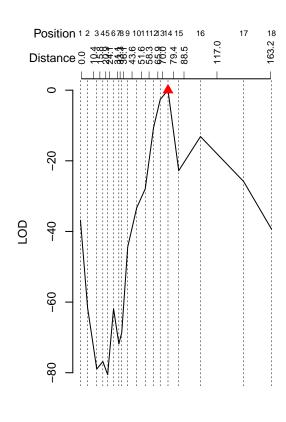Markers: 3043, 3044, 3045, 3048, 3050, 3055, 3064, 3067, 3069, 3072, 3082, 3086, 3089, 3091, 3087, 3046, 3075

Distance: 0.0, 10.4, 15.8, 20.9, 24.1, 31.1, 33.3, 36.1, 43.6, 51.6, 58.3, 65.9, 70.0, 79.4, 88.5, 117.0, 163.2

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
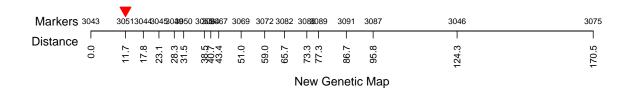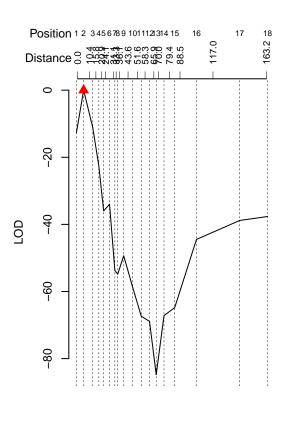
Distance: 0.0, 10.4, 15.8, 38.6, 46.6, 53.3, 60.9, 74.4, 83.5, 112.1, 158.3

LOD

Frame

Adding marker 3048 (chrC05_1533735)

Markers: 3043 3044 3045 3048 3049 3050 3055 3064 3067 3069 3072 3082 3086 3089 3091 3087 3046 3075

Distance: 0.0 10.4 15.8 20.0 22.0 24.7 31.7 33.9 36.7 44.2 52.2 58.9 66.5 70.5 80.0 89.1 117.6 163.7

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Distance: 0.0 10.4 15.8 20.0 22.0 24.7 31.1 36.4 43.6 51.6 58.3 65.0 76.0 79.4 88.5 117.0 163.2

LOD

Frame

Adding marker 3056 (chrC05_2338898)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix
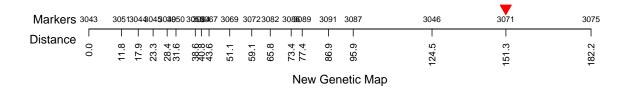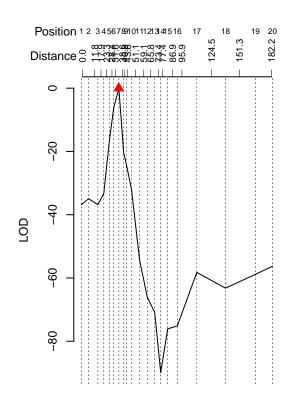
Frame

Adding marker 3057 (chrC05_2368587)

Markers 3043 3044 3045 3048 3050 3063 3067 3069 3072 3082 3086 3089 3091 3087 3046 3075

Distance 0.0 10.4 15.8 20.9 24.1 31.1 34.2 37.3 44.8 52.8 59.5 67.1 71.1 80.6 89.7 118.2 164.3

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

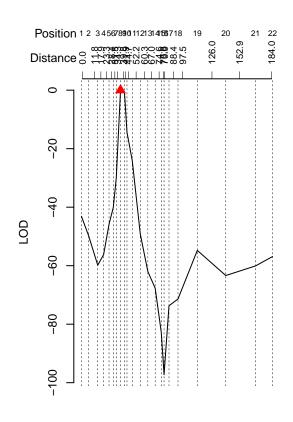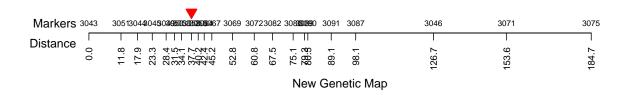Distance 0.0 10.4 15.8 24.1 31.1 38.4 43.6 51.6 58.3 65.0 79.4 88.5 117.0 163.2

LOD

Frame

Adding marker 3065 (chrC05_2370430)

Adding marker 3092 (chrC05_6162815)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3051 (chrC05_163897)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3071 (chrC05_37061969)

Adding marker 3053 (chrC05_1854402)

Markers 3043 3051 3044 3045 3049 3050 3053 3055 3064 3067 3069 3072 3082 3086 3089 3091 3087 3046 3071 3075

Distance 0.0 11.8 17.9 23.3 28.4 31.5 34.3 39.7 41.9 44.7 52.2 60.2 66.9 74.5 78.5 88.0 97.1 125.6 152.5 183.5

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Distance 0.0 11.7 17.9 23.3 28.4 31.5 39.7 41.9 44.7 51.1 59.1 65.8 73.4 86.9 95.9 124.5 151.3 182.2

LOD
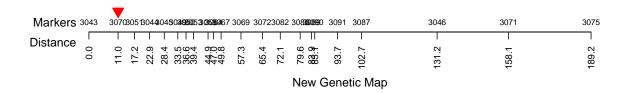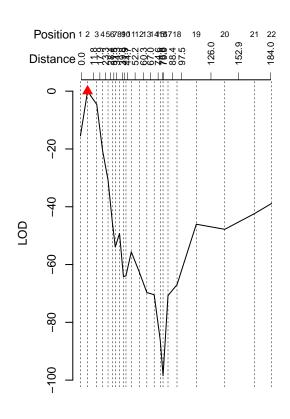
Frame

Adding marker 3090 (chrC05_6037939)

Markers 3043 3051 3044 3045 3049 3050 3053 3055 3064 3067 3069 3072 3082 3086 3089 3090 3091 3087 3046 3071 3075

Distance 0.0 11.8 17.9 23.3 28.4 31.5 34.3 39.8 41.9 44.7 52.2 60.3 67.0 74.6 78.8 79.8 88.4 97.5 126.0 152.9 184.0

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

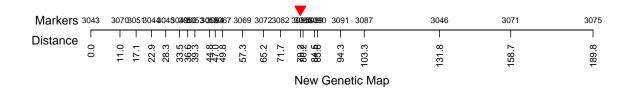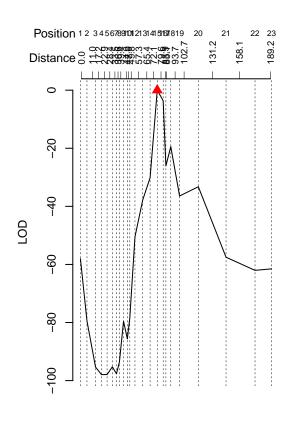Distance 0.0 11.8 17.9 23.3 28.4 31.5 34.3 39.8 41.9 44.7 52.2 60.3 66.9 74.5 78.0 88.0 97.1 125.6 152.5 183.5

LOD

Frame

Adding marker 3054 (chrC05_2338837)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3058 (chrC05_2368645)

Markers

3043 3051 3044 3045 3049 3050 3053 3058 3055 3064 3067 3069 3072 3082 3086 3089 3090 3091 3087 3046 3071 3075

Distance

0.0 11.8 17.9 23.3 28.4 31.5 34.1 37.7 40.2 45.2 52.8 60.8 67.5 75.1 80.3 89.1 98.1 126.7 153.6 184.7

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

Distance

0.0 11.8 17.3 23.2 28.0 34.7 41.7 52.2 60.3 67.0 76.0 88.4 97.5 126.0 152.9 184.0

LOD

Frame

Adding marker 3080 (chrC05_42108255)

Markers

| 3043 | 3051 3044 3045 3049 3050 3053 3055 3064 3067 3069 3072 3082 3086 3089 3090 3091 3087 | 3046 | 3071 | 3080 | 3075 |

Distance: 0.0 11.8 17.9 23.3 28.4 31.5 39.8 41.9 44.7 52.2 60.3 67.0 74.6 80.8 88.6 97.6 126.1 153.0 188.6 210.9

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

Distance: 0.0 11.7 23.0 40.0 44.7 52.2 60.3 74.0 88.4 97.5 126.0 152.9 184.0

LOD

Frame

Adding marker 3081 (chrC05_42215675)

Markers: 3043 3051 3044 3045 3049 3050 3053 3055 3064 3067 3069 3072 3082 3086 3089 3090 3091 3087 3046 3071 3081 3075

Distance: 0.0 11.8 17.9 23.3 28.4 31.5 39.8 44.7 52.2 60.3 67.0 74.6 78.8 80.8 88.6 97.6 126.1 153.2 186.0 207.3

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

Distance: 0.0 11.7 17.2 23.4 31.8 40.4 44.7 52.2 60.3 67.0 74.6 80.0 88.4 97.5 126.0 152.9 184.0

LOD

Frame

Adding marker 3070 (chrC05_323355)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3085 (chrC05_4824849)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3073 (chrC05_40355296)

Markers 3043 3070 3051 3044 3045 3049 3050 3053 3055 3064 3067 3069 3072 3082 3085 3086 3089 3090 3091 3087   3046   3071   3073   3075

Distance 0.0 11.0 17.1 22.9 28.3 33.5 36.6 39.3 44.8 47.0 49.8 57.3 65.2 71.7 80.2 84.5 86.5 94.3 103.3   131.8   158.7   179.5   196.4

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21   22   23   24

Distance 0.0 11.0 22.9 36.6 49.8 57.3 65.2 79.2 94.3 103.3 131.8 158.7 189.8

LOD

Frame

Adding marker 3079 (chrC05_41560716)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3052 (chrC05_164314)

Markers: 3043, 3070, 3052, 3044, 3045, 3049, 3050, 3053, 3055, 3064, 3067, 3069, 3072, 3082, 3085, 3086, 3089, 3090, 3091, 3087, 3046, 3071, 3073, 3079, 3075

Distance: 0.0, 11.0, 16.8, 18.8, 24.7, 30.1, 35.3, 38.4, 41.1, 46.6, 48.5, 51.5, 59.1, 67.0, 73.5, 82.0, 84.0, 86.2, 87.4, 96.1, 105.1, 133.6, 160.4, 181.4, 188.9, 206.1

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26

Distance: 0.0, 11.0, 22.0, ... 57.3, 95.2, 70.2, 86.0, 94.3, 103.3, 131.8, 158.6, 179.6, 187.0, 204.4

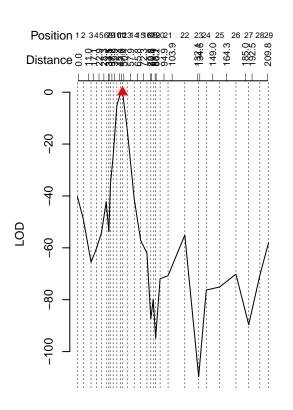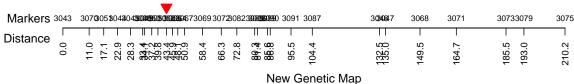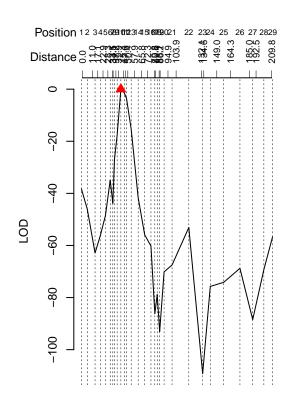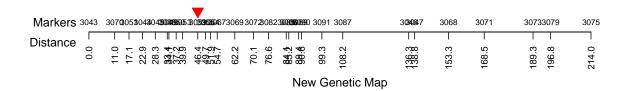Frame

Adding marker 3059 (chrC05_2369059)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Frame

Adding marker 3068 (chrC05_29269839)

LOD (above diag.) and Recombination Fraction Matrix

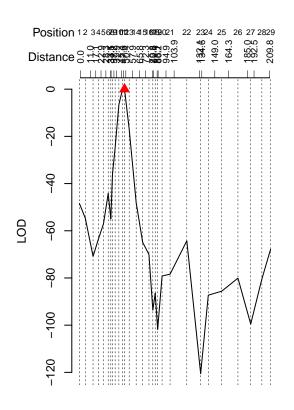# Adding marker 3076 (chrC05_41473437)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3078 (chrC05_41528883)

Markers: 3043 3070 3053 3044 3045 3049 3050 3053 3055 3064 3067 3069 3072 3082 3085 3086 3089 3090 3091 3087   3046   3068   3071   3073 3079 3078   3075

Distance: 0.0 11.0 17.1 22.9 28.3 33.5 36.3 44.8 49.8 57.3 65.2 71.7 80.2 84.5 94.3 103.3   131.9   147.3   162.8   183.5 191.1 197.7   228.7

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20   21   22   23   24   25   26 27

Distance: 0.0 11.0 22.9 28.9 36.3 57.2 95.2 94.3 103.3   131.9   147.2   162.6   183.0   191.0 208.3

LOD

Frame

Adding marker 3047 (chrC05_13116997)

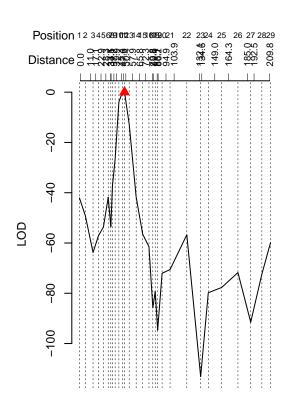LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3048 (chrC05_1533735)

Adding marker 3052 (chrC05_164314)

Adding marker 3054 (chrC05_2338837)

Markers

Distance
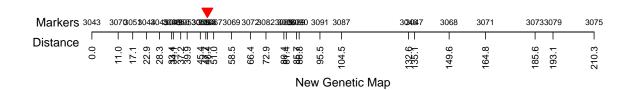
New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD
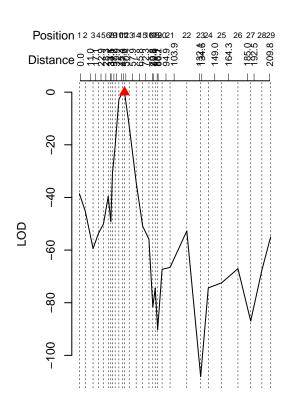
Frame

Adding marker 3056 (chrC05_2338898)

Markers: 3043 3070 3053 3044 3045 3058 3055 3056 3059 3067 3069 3072 3082 3085 3089 3090 3091 3087 3046 3047 3068 3071 3073 3079 3075

Distance: 0.0 11.0 17.1 22.9 28.3 33.4 37.2 40.6 45.1 50.9 58.4 66.4 72.8 80.2 85.8 95.5 104.4 132.6 135.1 149.5 164.8 185.5 193.0 210.3

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Distance: 0.0 11.0 17.1 22.9 28.3 37.2 40.6 45.1 58.4 72.8 94.9 103.9 132.6 149.0 164.3 185.0 192.5 209.8

LOD

Frame

Adding marker 3057 (chrC05_2368587)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3058 (chrC05_2368645)

Adding marker 3059 (chrC05_2369059)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3060 (chrC05_2369110)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3061 (chrC05_2369143)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3062 (chrC05_2369805)

Adding marker 3063 (chrC05_2369817)

Markers: 3043 3070 3051 3044 3045 3048 3049 3050 3053 3055 3064 3067 3069 3072 3082 3085 3086 3089 3090 3091 3087 3046 3047 3068 3071 3073 3079 3075

Distance: 0.0 11.0 17.1 22.9 28.3 33.4 37.2 39.9 45.4 51.0 58.5 66.4 72.9 80.4 86.8 95.5 104.5 135.1 149.6 164.8 185.6 193.1 210.3

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Distance: 0.0 11.0 17.0 22.9 28.3 37.2 45.4 57.0 66.4 72.9 94.9 103.9 132.6 149.0 164.3 185.0 192.5 209.8

LOD

Frame

Adding marker 3065 (chrC05_2370430)

Markers: 3043 3070 3053 3043 3045 3048 3049 3050 3053 3055 3064 3065 3067 3069 3072 3082 3085 3086 3089 3090 3091 3087 3046 3047 3068 3071 3073 3079 3075

Distance: 0.0 11.0 17.1 22.9 28.3 32.4 37.2 39.5 45.4 48.0 52.6 60.3 68.3 74.7 83.3 86.9 88.1 97.4 106.3 134.5 137.0 151.4 166.7 187.4 194.9 212.2

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Distance: 0.0 17.0 22.9 57.2 94.9 103.9 134.6 149.0 164.3 185.0 192.5 209.8

LOD

Frame

Adding marker 3066 (chrC05_2582920)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3074 (chrC05_40796399)

Markers 3043 3070 3053 3044 3045 3048 3050 3053 3055 3064 3067 3069 3072 3082 3085 3086 3089 3090 3091 3087 3046 3047 3068 3071 3073 3074 3079 3075

Distance 0.0 11.0 17.1 22.9 28.3 33.4 37.2 39.9 45.4 50.4 57.9 65.8 72.3 79.8 80.8 86.2 94.9 103.9 132.0 132.5 149.0 164.2 184.7 189.0 194.3 211.4

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Distance 0.0 11.0 17.1 22.9 28.3 33.4 37.2 39.9 45.4 50.4 57.9 65.8 72.3 94.9 103.9 132.6 149.0 164.3 185.0 192.5 209.8

LOD

Frame

Adding marker 3076 (chrC05_41473437)

Markers 3043 3070 3051 3044 3045 3048 3049 3050 3053 3055 3064 3067 3069 3072 3082 3085 3086 3089 3090 3091 3087 3046 3047 3068 3071 3073 3074 3079 3076 3075

Distance 0.0 11.0 17.1 22.9 28.3 34.4 37.2 39.5 45.4 50.4 57.9 65.8 72.3 80.8 85.4 86.1 94.9 103.9 132.0 132.5 148.9 164.1 184.6 188.9 194.5 197.2 216.5

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Distance 0.0 17.0 22.9 28.3 34.4 37.2 39.5 45.4 50.4 57.9 65.8 72.3 80.8 85.4 86.1 94.9 103.9 132.0 149.0 164.2 184.6 194.5 211.4

LOD

Frame

Adding marker 3077 (chrC05_41517654)

Markers 3043 3070 3051 3044 3045 3048 3049 3050 3053 3055 3064 3067 3069 3072 3082 3085 3086 3089 3090 3091 3087   3046 3047 3068   3071   3073 3074 3079 3076 3077   3075

Distance 0.0 11.0 17.1 22.9 28.3 34.4 37.2 39.5 45.4 50.4 57.9 65.8 72.3 80.8 86.2 94.9 103.9   132.0 132.5   148.9   164.1   184.6 188.9 194.2 197.2 201.5   218.0

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21   22   23 24   25   26 27 28 29 30 31

Distance 0.0 11.0 22.9 34.4 37.2 39.5 45.4 50.4 57.9 65.8 72.3 80.8 86.2 94.9 103.9   132.0 132.5   148.9   164.1   184.6 188.9 194.2 197.2   216.5

LOD

Frame

Adding marker 3078 (chrC05_41528883)

Markers

New Genetic Map

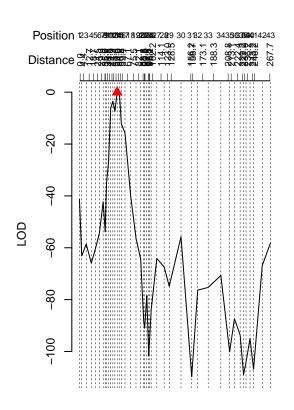LOD (above diag.) and Recombination Fraction Matrix

LOD

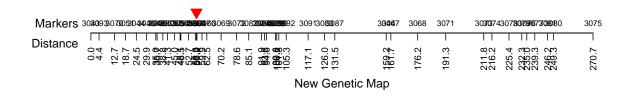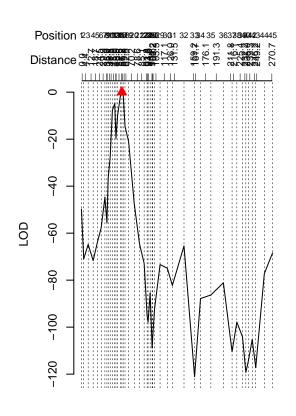Frame

Adding marker 3080 (chrC05_42108255)

Adding marker 3081 (chrC05_42215675)

Markers | Distance | New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix
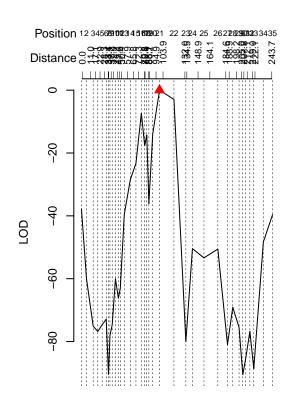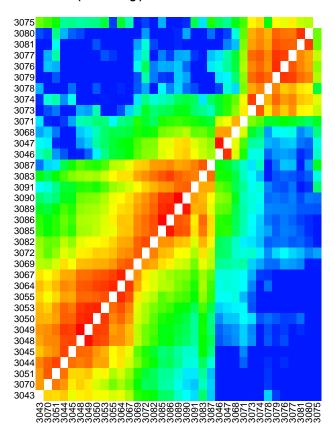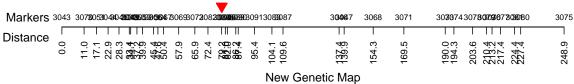
Adding marker 3083 (chrC05_4822984)

Adding marker 3084 (chrC05_4824452)

Markers / New Genetic Map

Markers: 3043 3070 3051 3044 3045 3048 3049 3050 3053 3055 3064 3067 3069 3072 3082 3084 3085 3086 3089 3090 3091 3083 3087   3046 3047 3068 3071 3073 3074 3078 3079 3076 3077 3081 3080   3075

Distance: 0.0 11.0 17.1 22.9 28.3 34.1 36.9 39.9 45.4 50.4 57.9 65.9 72.4 78.0 82.1 86.4 95.4 104.1 109.6   139.4 139.9 154.3 169.5 190.0 194.3 203.6 210.4 213.2 217.4 224.4   248.9

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 12 3 4 5 6 7 8 9 10 11 13 14 15 16 17 20 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

Distance: 0.0 11.2 ... 106.6 136.5 153.4 168.6 189.4 205.7 228.6 248.1

LOD

Frame

Adding marker 3088 (chrC05_6013739)

New Genetic Map
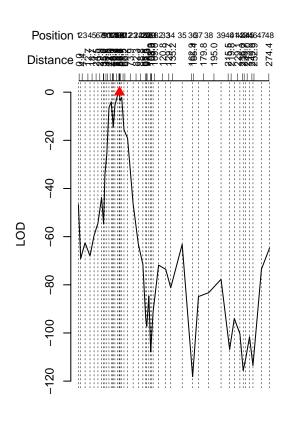
Markers: 3043 3070 3051 3044 3045 3048 3049 3050 3053 3055 3064 3067 3069 3072 3082 3084 3085 3086 3088 3089 3090 3091 3083 3087 3046 3047 3068 3071 3074 3073 3078 3079 3077 3076 3080 3075

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3092 (chrC05_6162815)

Markers 3043 30730530400450505360567306930720828304230392 30913083087 30467 3068 3071 30730743078307307307080 3075

Distance 0.0 11.0 17.1 22.9 28.3 33.4 37.9 39.5 45.6 50.4 57.9 65.9 72.5 78.0 86.4 91.4 103.4 112.2 117.7 145.9 147.3 162.4 177.6 198.1 202.4 211.7 218.5 225.5 232.5 235.5 257.0

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 12 3456789 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

Distance 0.0 11.0 17.2 22.9 28.3 33.4 37.9 45.6 50.4 57.9 65.9 72.5 78.0 86.4 91.4 105.16 137.9 154.3 169.5 193.9 203.4 219.4 224.4 248.9
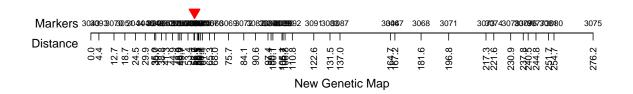
LOD

Frame

Adding marker 3093 (chrC05_921623)

Adding marker 3058 (chrC05_2368645)

Markers 3043 3093 3070 3051 3044 3045 3048 3049 3050 3053 3055 3058 3064 3067 3069 3072 3082 3084 3085 3086 3089 3090 3091 3083 3087 3046 3047 3068 3071 3073 3074 3078 3079 3076 3077 3081 3080 3075

Distance 0.0 4.4 12.7 18.7 24.5 29.9 35.6 36.8 37.4 41.9 45.9 49.7 52.5 60.0 68.0 74.6 81.7 84.1 88.3 88.9 97.5 106.2 111.7 139.4 141.9 156.3 171.5 192.0 196.3 205.6 212.5 216.5 219.5 226.4 229.4 250.9

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38

Distance 148.9 155.8 171.0 194.5 205.1 212.6 226.9 250.4

LOD

Frame

Adding marker 3066 (chrC05_2582920)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3059 (chrC05_2369059)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3092 (chrC05_6162815)

Markers / Distance / New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

LOD / Position / Distance / Frame

Adding marker 3088 (chrC05_6013739)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3057 (chrC05_2368587)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3054 (chrC05_2338837)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3060 (chrC05_2369110)

Markers

Distance

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3056 (chrC05_2338898)

Markers

Distance

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

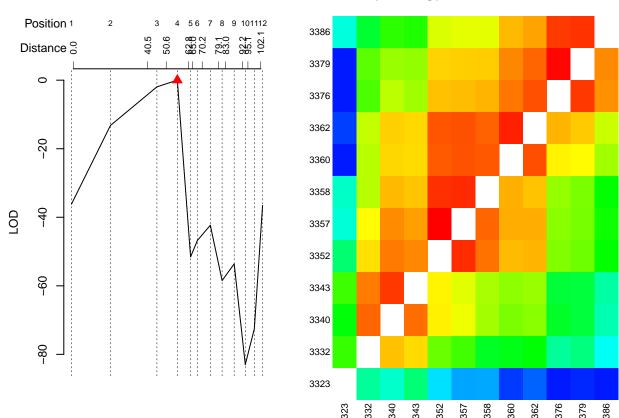# Adding marker 3065 (chrC05_2370430)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3061 (chrC05_2369143)

Adding marker 3062 (chrC05_2369805)

Markers

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3063 (chrC05_2369817)

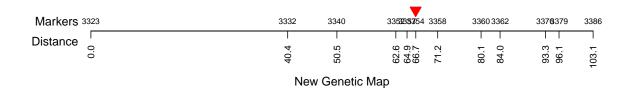
Markers

Distance

New Genetic Map

Position

Distance

LOD

Frame

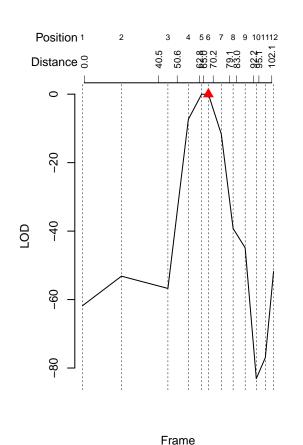LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3052 (chrC05_164314)

LOD (above diag.) and Recombination Fraction Matrix

Final Genetic Map
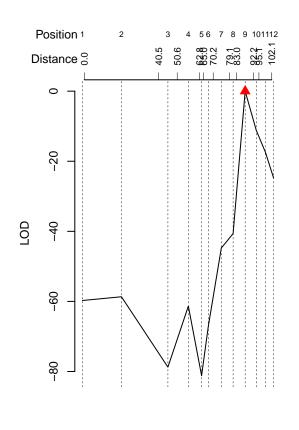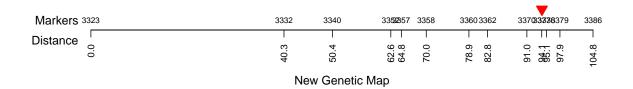
LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3339 (chrC08_27611851)

Markers 3323   3340 3339   3358   3360   3379

Distance 0.0   45.2 46.8   64.1   73.5   87.3

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1   2   3   4   5   6

Distance 0.0   44.2   61.6   70.9   84.6

LOD

Frame

Adding marker 3352 (chrC08_29800263)

Markers 3323   3340   3352   3358   3360   3379

Distance 0.0   44.5   56.8   62.4   71.7   85.4

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1   2   3   4   5   6

Distance 0.0   44.2   61.6   70.9   84.6

LOD

Frame
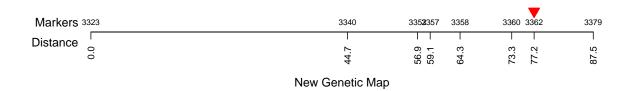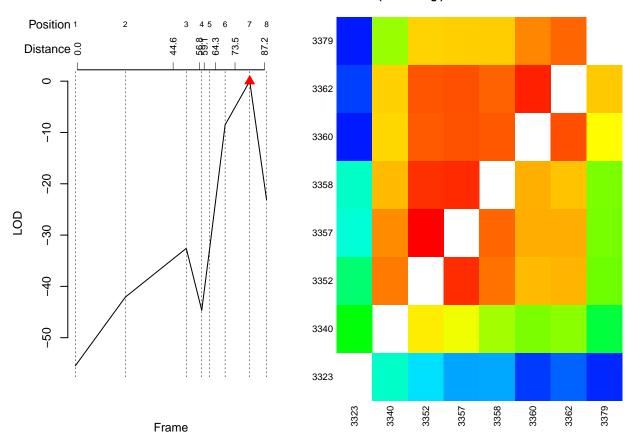
Adding marker 3357 (chrC08_30018121)
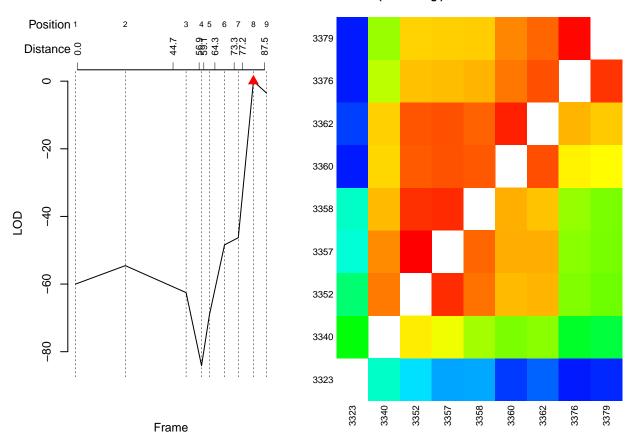
Adding marker 3362 (chrC08_31707254)

Markers 3323 3340 3352 3357 3358 3360 3362 3379
Distance 0.0 44.7 56.9 59.1 64.3 73.3 77.2 87.5

New Genetic Map

Position 1 2 3 4 5 6 7 8
Distance 0.0 44.6 56.8 59.1 64.3 73.5 87.2

LOD

Frame

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3376 (chrC08_33823500)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix
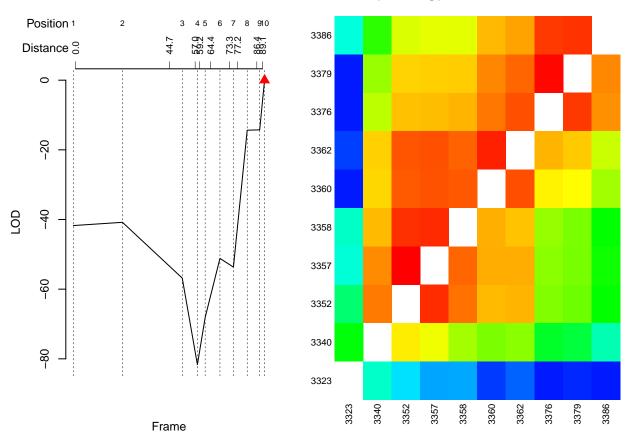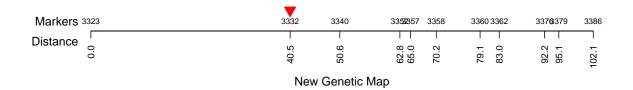
Adding marker 3386 (chrC08_35925706)

Markers 3323 3340 3352 3357 3358 3360 3362 3376 3379 3386
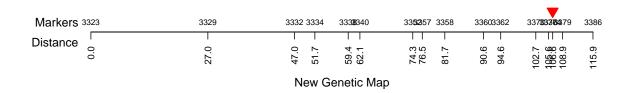Distance 0.0 44.8 57.0 59.2 64.4 73.3 77.2 86.5 89.3 96.2

New Genetic Map

Position 1 2 3 4 5 6 7 8 9 10
Distance 0.0 44.7 57.0 59.2 64.4 73.3 77.2 86.4 89.1

LOD

Frame

LOD (above diag.) and Recombination Fraction Matrix
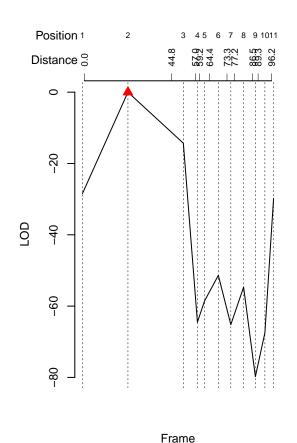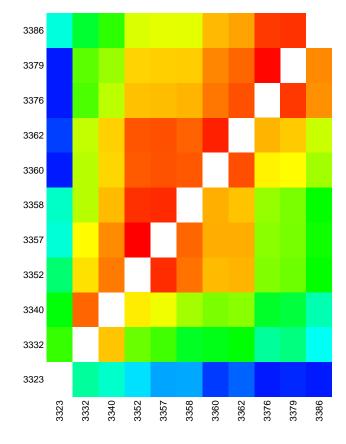
Adding marker 3332 (chrC08_23807763)

Markers

| 3323 | 3332 | 3340 | 3352 3357 3358 | 3360 3362 | 3376 3379 | 3386 |

Distance

0.0 | 40.5 | 50.6 | 62.8 65.0 | 70.2 | 79.1 83.0 | 92.2 95.1 | 102.1

New Genetic Map

Frame

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3343 (chrC08_27853082)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3354 (chrC08_29951682)

Markers 3323   3332   3340   3352 3357 3354 3358   3360 3362   3376 3379   3386

Distance 0.0   40.4   50.5   62.6 64.9 66.7 71.2   80.1 84.0   93.3 96.1   103.1

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1   2   3   4   5 6   7   8   9   10 11 12

Distance 0.0   40.5   50.6   62.8 65.0 70.2   79.1 83.0   92.2 95.1   102.1

LOD

Frame
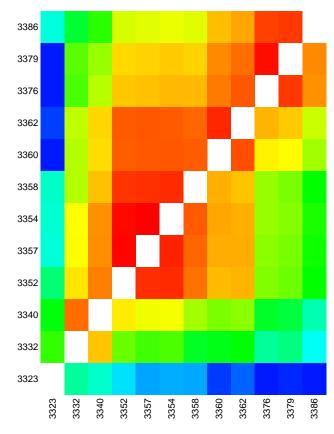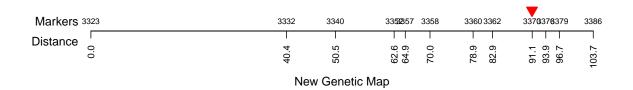
Adding marker 3370 (chrC08_33470141)

Markers 3323   3332   3340   3352 3357 3358   3360 3362   3370 3376 3379   3386

Distance 0.0   40.4   50.5   62.6 64.9 70.0   78.9 82.9   91.1 93.9 96.7   103.7

New Genetic Map

Position 1   2   3   4   5 6   7   8   9   10 11 12

Distance 0.0   40.5   50.6   62.8 65.0 70.2   79.1 83.0   92.2 95.1 102.1

LOD

Frame

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3373 (chrC08_33822384)

Markers 3323   3332   3340   3352 3357 3358   3360 3362   3370 3373 3376 3379   3386

Distance 0.0   40.3   50.4   62.6 64.8   70.0   78.9 82.8   91.0 94.1 95.1 97.9   104.8

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1   2   3   4   5 6   7   8   9 10 11 12 13

Distance 0.0   40.4   50.5   62.6 64.9 70.0   78.9 82.9   91.1 95.1 95.7   103.7

LOD

Frame

Adding marker 3387 (chrC08_35925742)

Markers: 3323 3332 3340 3352 3357 3358 3360 3362 3370 3376 3379 3386 3387

Distance: 0.0 40.3 50.4 62.6 64.8 70.0 78.9 82.8 91.0 93.8 96.6 103.7

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

LOD

Frame

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13

Distance: 0.0 40.4 50.5 64.9 70.0 78.9 82.9 91.9 96.7 103.7

Adding marker 3329 (chrC08_19590267)

LOD (above diag.) and Recombination Fraction Matrix
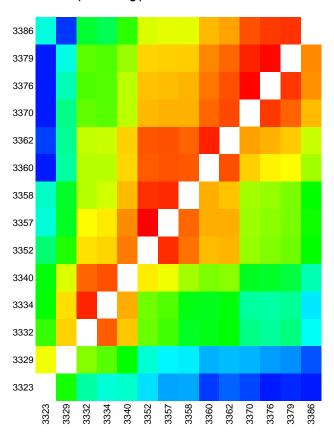
Adding marker 3334 (chrC08_25665794)

Markers: 3323, 3329, 3332, 3334, 3340, 3352, 3357, 3358, 3360, 3362, 3370, 3376, 3379, 3386

Distance: 0.0, 27.0, 47.1, 51.8, 60.6, 72.7, 74.9, 80.1, 89.0, 92.9, 101.1, 104.0, 106.8, 113.7
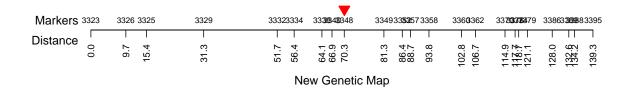
New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Frame
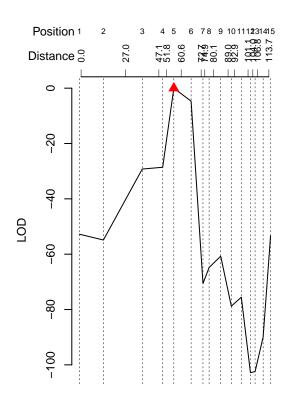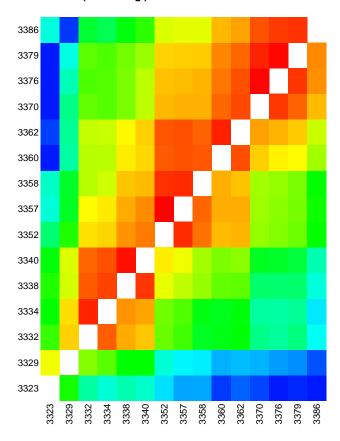
Adding marker 3338 (chrC08_27347526)

Markers

3323   3329   3332 3334   3338 3340   3352 3357 3358   3360 3362   3373 3376 3379   3386

Distance

0.0   27.0   47.0   51.8   59.3   62.1   74.2   76.5   81.6   90.6   94.5   102.7   105.5   108.3   115.3

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix
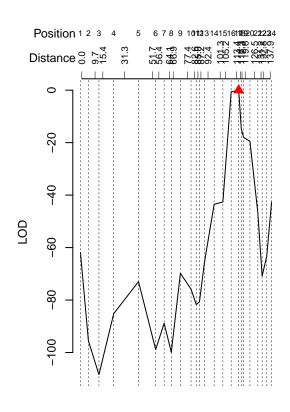
Frame
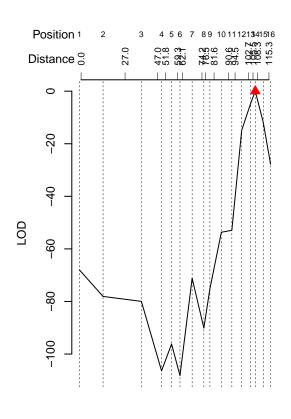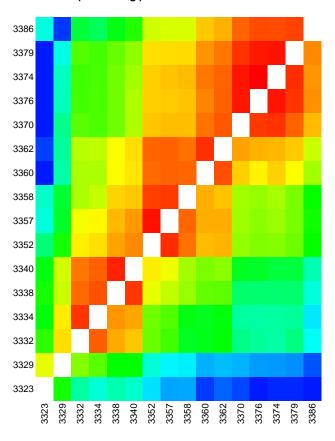
Adding marker 3374 (chrC08_33823353)

Markers: 3323 3329 3332 3334 3338 3340 3352 3357 3358 3360 3362 3370 3376 3374 3379 3386

Distance: 0.0 27.0 47.0 51.7 59.4 62.1 74.3 76.5 81.7 90.6 94.6 102.7 105.8 106.8 108.9 115.9

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Distance: 0.0 27.0 47.0 51.8 59.3 62.1 76.5 81.6 90.5 94.5 102.7 105.3 108.3 115.3

LOD

Frame
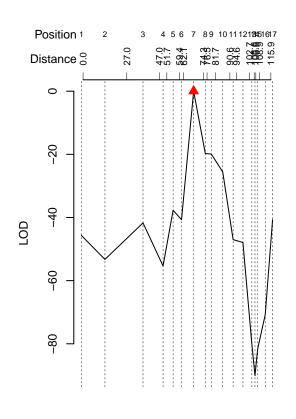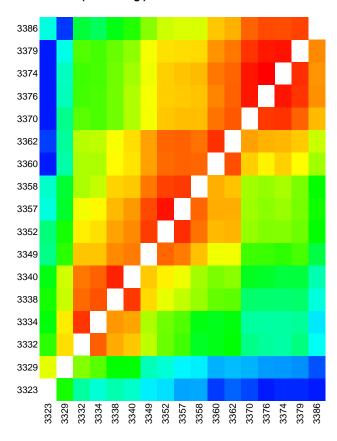
Adding marker 3349 (chrC08_29463430)

Markers 3323   3329   3332 3334 3338 3340   3349 3352 3357 3358   3360 3362   3370 3376 3374 3379   3386

Distance 0.0   27.0   47.0 51.7 59.4 62.2   72.6 77.8 80.0 85.2   94.1 98.1   106.2 108.1 112.4   119.4

New Genetic Map

Position 1   2   3   4 5 6 7 8 9 10 11 12 13 14 15 16 17

Distance 0.0   27.0   47.0 51.7 59.4 62.4   76.3 81.7   90.6 94.6   102.7 106.9 108.9 115.9

LOD

Frame

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3388 (chrC08_36512363)

Markers

3323 3329 3332 3334 3338 3340 3349 3352 3357 3358 3360 3362 3370 3376 3374 3379 3386 3388

Distance

0.0 27.0 47.0 51.7 59.4 62.2 72.6 77.9 80.1 85.3 94.2 98.1 106.3 108.1 110.1 112.5 119.4 125.3

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

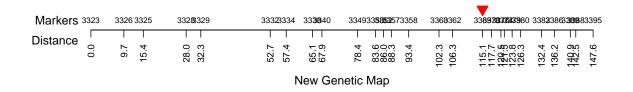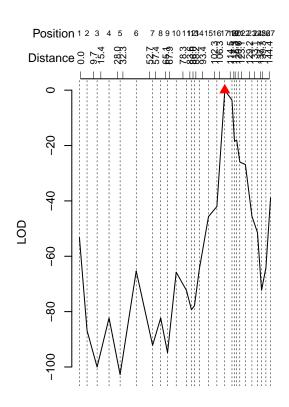Distance 0.0 27.0 47.0 51.7 59.4 62.2 72.6 80.8 85.2 94.1 98.1 106.1 112.4 119.4

LOD

0 −20 −40 −60 −80

Frame

Adding marker 3389 (chrC08_36512444)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3395 (chrC08_38393259)

Markers 3323 3329 33323334 333840 3349 33557 3358 33603362 33703767479 338633988 3395

Distance 0.0 27.0 47.0 51.7 59.4 62.2 72.7 77.9 80.1 85.3 94.2 98.1 106.3 198.1 112.5 119.4 124.1 125.7 130.8

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 10 11 12 13 14 16 17 18 20
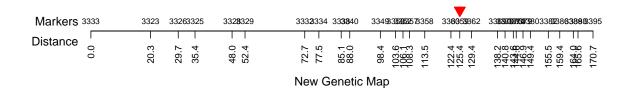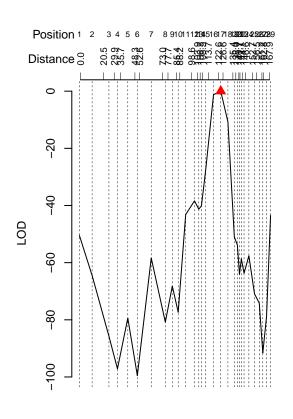
Distance 0.0 27.0 47.0 51.7 59.4 62.2 72.7 80.1 85.3 94.2 98.1 106.3 112.5 119.4 124.1

LOD

Frame
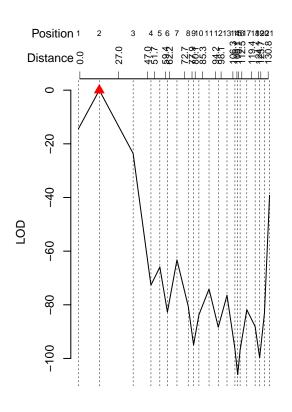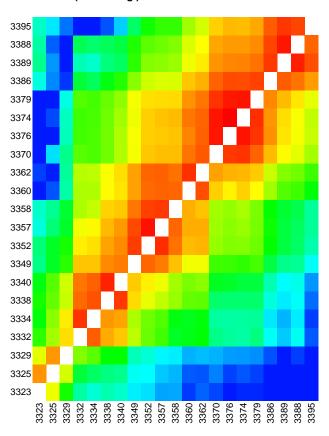
Adding marker 3325 (chrC08_16053571)

Markers 3323 3325 3329 33323334 33383340 3349 3352 3357 3358 3360 3362 3370 3376 3374 3379 3386 3388 3395

Distance 0.0 14.0 29.5 49.7 54.4 62.1 64.9 75.3 80.6 82.8 88.0 96.9 100.8 109.0 112.8 115.2 122.1 126.8 128.4 133.5

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix
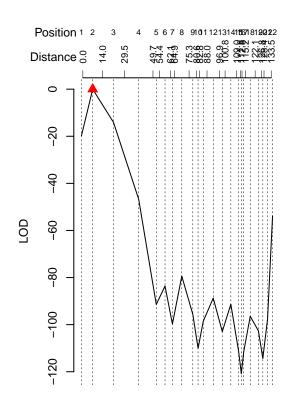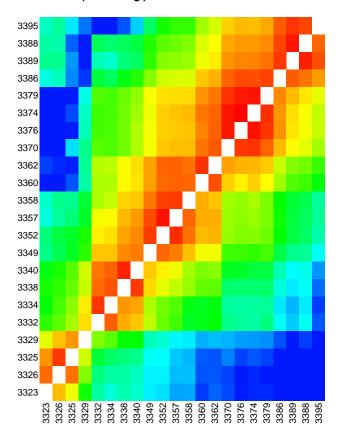
Adding marker 3326 (chrC08_1788246)

Markers: 3323, 3326, 3325, 3329, 3332, 3334, 3338, 3340, 3349, 3352, 3357, 3358, 3360, 3362, 3370, 3376, 3379, 3386, 3388, 3389, 3395

Distance: 0.0, 9.7, 15.4, 31.3, 51.6, 56.4, 64.0, 66.9, 77.3, 82.5, 84.7, 89.9, 98.8, 102.7, 110.9, 114.8, 117.1, 124.0, 128.7, 130.3, 135.4

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

Distance: 0.0, 14.0, 29.5, 49.7, 54.4, 64.9, 75.3, 80.6, 88.0, 96.9, 100.0, 109.0, 115.2, 122.1, 128.4, 133.5
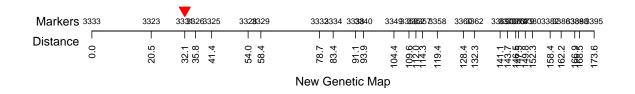
LOD

Frame

Adding marker 3335 (chrC08_25665920)

Adding marker 3347 (chrC08_27957326)

Markers / Distance / New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position / Distance / Frame / LOD

Adding marker 3348 (chrC08_27957539)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3350 (chrC08_29610270)

Markers: 3323, 3326, 3325, 3329, 3332, 3334, 3338, 3340, 3349, 3350, 3352, 3357, 3358, 3360, 3362, 3370, 3376, 3374, 3379, 3386, 3389, 3388, 3395

Distance: 0.0, 9.7, 15.4, 31.3, 51.7, 56.4, 64.1, 66.9, 77.4, 82.6, 85.0, 87.2, 92.4, 101.3, 105.2, 113.4, 116.3, 119.6, 126.5, 131.8, 132.8, 137.9

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Distance: 0.0, 9.7, 15.4, 31.3, 51.6, 56.4, 66.9, 77.3, 84.5, 89.9, 98.7, 102.7, 110.9, 114.1, 124.0, 130.3, 135.4

LOD
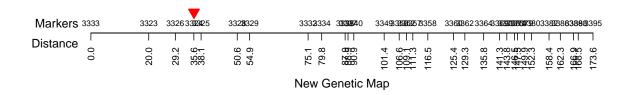
Frame

Adding marker 3372 (chrC08_33595891)

Markers: 3323 3326 3325 3329 33323334 333840 3349 33565257 3358 3360362 33703376479 3386338883395

Distance: 0.0 9.7 15.4 31.3 51.7 56.5 64.1 67.0 77.4 82.6 85.1 87.3 92.5 101.4 105.3 113.5 118.5 120.9 127.8 132.5 139.2

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Distance: 0.0 9.7 15.4 31.3 51.7 56.4 66.9 77.4 85.9 92.4 105.3 113.4 126.5 137.9

LOD

Frame

Adding marker 3380 (chrC08_34233146)

Adding marker 3381 (chrC08_34444938)

Adding marker 3382 (chrC08_35395195)

Markers: 3323, 3326, 3325, 3329, 3332, 3334, 3338, 3340, 3349, 3350, 3352, 3357, 3358, 3360, 3362, 3370, 3376, 3374, 3379, 3380, 3382, 3386, 3389, 3388, 3395

Distance: 0.0, 9.7, 15.4, 31.3, 51.7, 56.5, 64.1, 67.0, 77.4, 82.6, 85.1, 87.3, 92.5, 101.4, 105.3, 113.5, 116.3, 119.7, 122.1, 128.2, 132.1, 136.3, 138.3, 143.4

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix
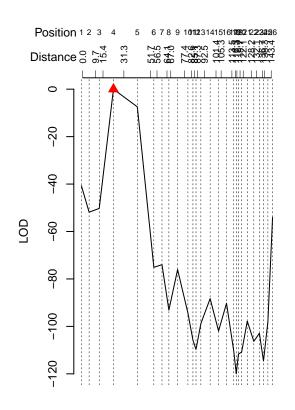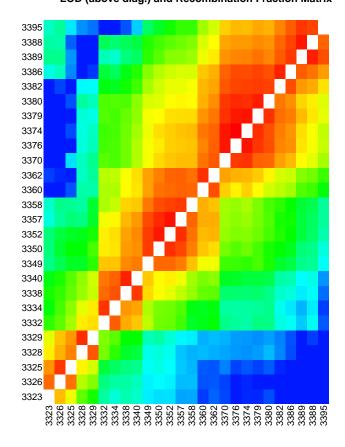
Adding marker 3328 (chrC08_18958473)

Adding marker 3355 (chrC08_30001023)

Markers

3323 3326 3325 3328 3329 3332 3334 3338 3340 3349 3350 3352 3355 3358 3360 3362 3370 3376 3379 3380 3382 3386 3388 3395

Distance

0.0 9.7 15.4 28.0 32.3 52.7 57.4 65.1 67.9 78.4 83.6 86.0 88.2 90.3 95.7 104.8 108.7 116.9 120.7 123.1 125.5 131.6 135.5 141.2 146.8

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

Distance: 0.0 9.7 15.4 28.0 32.3 52.7 57.4 65.1 67.9 78.3 83.6 88.3 93.4 106.3 116.3 119.6 123.4 129.2 135.8 144.4

LOD

Frame

Adding marker 3368 (chrC08_33435757)

Markers / Distance / New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position / Distance / LOD / Frame

Adding marker 3369 (chrC08_33466408)

Markers

3323   3326 3325   3328 3329   3332 3334 3338 3340   3349 3350 3352 3357 3358   3360 3362   3369 3370 3374 3376 3379 3380   3382 3386 3388 3389 3395

Distance

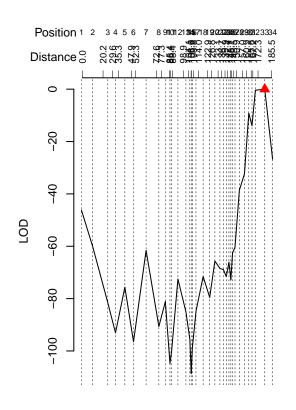0.0   9.7 15.4   28.0 32.3   52.7 57.4   65.1 67.9   78.4 83.6 86.0 88.3   93.4   102.3 106.3   115.1 117.7 120.5 123.8 126.3   132.4 136.2 140.9 142.5   147.6

New Genetic Map

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

Distance 0.0 9.7 15.4 28.0 32.3 52.7 57.4 65.1 67.9 78.3 83.6 88.3 93.4 106.3 115.1 117.7 120.5 123.8 126.3 139.2 140.9 144.4

LOD

Frame

LOD (above diag.) and Recombination Fraction Matrix

3395 3388 3389 3386 3382 3380 3379 3374 3376 3370 3369 3362 3360 3358 3357 3352 3350 3349 3340 3338 3334 3332 3329 3328 3325 3326 3323

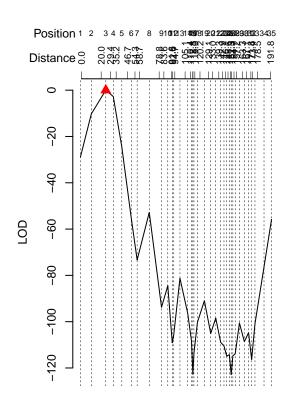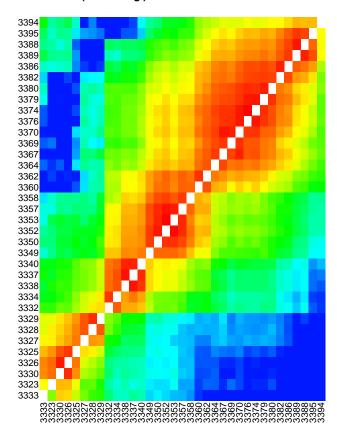3323 3326 3325 3328 3329 3332 3334 3338 3340 3349 3350 3352 3357 3358 3360 3362 3369 3370 3376 3374 3380 3382 3386 3389 3388 3395

Adding marker 3333 (chrC08_2522741)

Markers

3333 3323 3326 3325 3328 3329 3332 3334 3338 3340 3349 3350 3352 3357 3358 3360 3362 3369 3370 3374 3376 3379 3380 3382 3386 3388 3389 3395

Distance

0.0 20.5 29.9 35.7 48.3 52.6 73.0 77.7 85.4 88.2 98.6 103.9 108.3 108.5 113.7 122.6 126.6 135.4 138.0 140.7 144.1 146.6 152.7 156.5 162.1 162.8 167.9

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

Distance 0.0 9.7 15.4 28.9 32.3 52.7 57.4 65.9 78.4 80.6 83.4 102.6 106.3 115.4 117.6 121.0 126.2 132.4 136.7 147.6

LOD

Frame

Adding marker 3344 (chrC08_27889526)

Markers / Distance / New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Frame

Adding marker 3359 (chrC08_31451650)

Markers

| 3333 | 3323 | 3326 3325 | 3328 3329 | 3332 3334 3338 3340 | 3349 3350 3352 3357 3358 | 3360 3359 3362 | 3369 3370 3374 3376 3379 3380 3382 3386 3388 3389 3395 |

Distance

0.0 | 20.3 | 29.7 35.4 | 48.0 52.4 | 72.7 77.5 | 85.1 88.0 | 98.4 103.6 108.3 113.5 | 122.4 125.4 129.4 | 138.2 140.8 144.6 146.9 149.4 | 155.5 159.4 164.6 165.6 170.7

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

Distance: 0.0 20.5 29.9 35.7 48.3 52.6 73.9 77.7 85.4 88.6 98.0 103.7 108.3 113.7 122.6 125.0 129.6 138.0 140.4 144.0 146.7 149.7 155.7 159.0 164.4 165.1 170.7

LOD

Frame

Adding marker 3371 (chrC08_33588120)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3331 (chrC08_2376826)

Adding marker 3337 (chrC08_27347514)

Adding marker 3351 (chrC08_29680701)

Markers

Distance

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3364 (chrC08_33074143)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3383 (chrC08_35403237)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3391 (chrC08_36875001)

Markers 3333 3323 3326 3325 3328 3329 3332 3334 3338 3340 3349 3350 3357 3358 3360 3362 3364 3369 3370 3374 3376 3380 3382 3386 3388 3395 3391

Distance 0.0 20.2 29.6 35.3 47.9 52.3 72.6 77.3 85.4 88.4 98.9 104.2 108.8 114.0 122.9 126.8 133.3 138.8 141.3 144.0 147.4 149.8 155.9 159.8 164.1 166.1 171.2 174.9

New Genetic Map

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Distance 0.0 20.2 29.6 35.3 48.0 52.3 72.6 77.4 85.4 88.4 98.9 104.2 108.8 114.0 122.9 126.8 133.4 138.8 141.3 144.0 147.4 149.8 155.9 159.8 164.1 166.1 171.2

LOD

Frame

LOD (above diag.) and Recombination Fraction Matrix

3391 3395 3388 3389 3386 3382 3380 3379 3374 3376 3370 3369 3364 3362 3360 3358 3357 3352 3350 3349 3340 3337 3338 3334 3332 3329 3328 3325 3326 3323 3333

3333 3323 3326 3325 3328 3329 3332 3334 3338 3337 3340 3349 3350 3352 3357 3358 3360 3362 3364 3369 3370 3374 3376 3379 3380 3382 3386 3388 3389 3395 3391

Adding marker 3324 (chrC08_14833260)

Markers: 3333 3323 3326 3323 3325 3328 3329 3332 3334 3338 3340 3349 3350 3352 3357 3358 3360 3362 3364 3369 3370 3374 3376 3379 3380 3382 3386 3388 3389 3395

Distance: 0.0 20.0 29.2 35.6 38.1 50.6 54.9 75.1 79.8 88.9 90.9 101.4 106.6 111.3 116.5 125.4 129.3 135.8 141.3 143.8 146.5 149.9 152.3 158.4 162.3 168.5 169.9 173.6

New Genetic Map

Position: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Distance: 0.0 20.2 29.6 35.3 48.0 52.3 72.6 85.4 98.9 114.0 126.1 133.5 147.0 171.2

LOD

Frame

LOD (above diag.) and Recombination Fraction Matrix

3395 3388 3389 3386 3382 3380 3379 3374 3376 3370 3369 3364 3362 3360 3358 3357 3352 3350 3349 3340 3337 3338 3334 3332 3329 3328 3325 3324 3326 3323 3333

3333 3323 3326 3324 3325 3328 3329 3332 3334 3338 3340 3349 3350 3352 3357 3358 3360 3362 3364 3369 3370 3374 3376 3379 3380 3382 3386 3389 3388 3395

Adding marker 3342 (chrC08_27707160)

Markers

| 3333 | 3323 | 3326 3325 | 3328 3329 | 3332 3334 3338 3340 | 3349 3350 3352 3357 3358 | 3360 3362 3364 3369 3370 3374 3376 3379 3380 3382 3386 3388 3389 3395 |

Distance

0.0 20.2 29.6 35.3 47.9 52.3 72.6 77.4 84.7 88.0 90.2 100.7 105.9 110.3 115.7 124.7 128.6 135.1 140.6 143.0 146.8 149.1 151.6 157.7 161.6 167.8 172.9

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Distance 0.0 20.2 29.6 35.3 47.9 52.3 72.6 77.4 88.0 90.2 100.7 105.9 110.3 115.7 124.7 128.6 135.1 140.6 143.0 146.8 149.1 151.6 157.7 161.6 167.8 172.9

LOD

Frame

Adding marker 3356 (chrC08_30017144)

Markers

Distance

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3363 (chrC08_33038870)

Markers · Distance · New Genetic Map

Position · Distance · LOD · Frame

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3365 (chrC08_33080721)

Markers: 3333, 3323, 3326, 3325, 3328, 3329, 3332, 3334, 3338, 3340, 3349, 3350, 3352, 3357, 3358, 3360, 3362, 3364, 3365, 3369, 3370, 3374, 3376, 3379, 3380, 3382, 3386, 3388, 3389, 3395

Distance: 0.0, 20.2, 29.6, 35.3, 47.9, 52.3, 72.6, 77.3, 85.4, 88.4, 98.9, 104.2, 108.8, 114.0, 122.9, 126.8, 133.3, 136.3, 140.5, 143.0, 146.8, 149.1, 151.6, 157.7, 161.6, 167.8, 172.9

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Frame

Adding marker 3367 (chrC08_33332649)

Adding marker 3394 (chrC08_37584117)

New Genetic Map
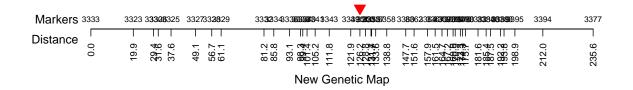
LOD (above diag.) and Recombination Fraction Matrix

Frame
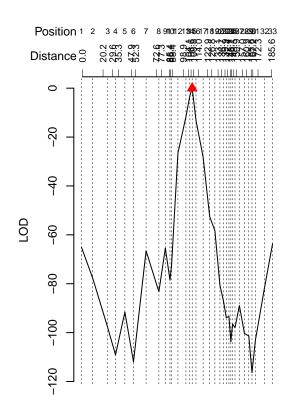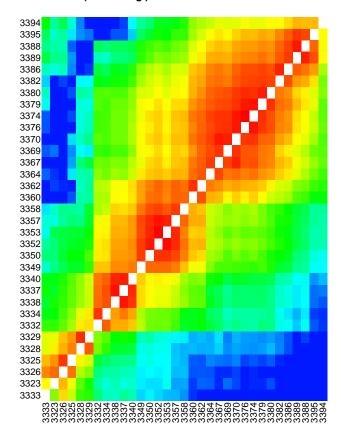
Adding marker 3353 (chrC08_29800340)
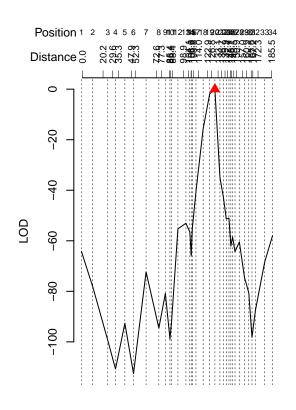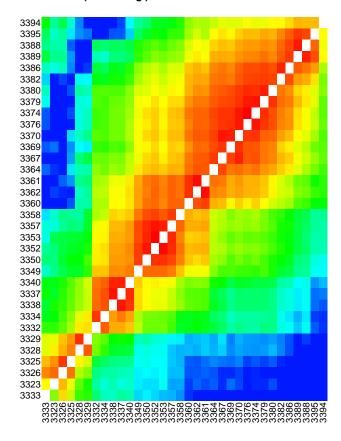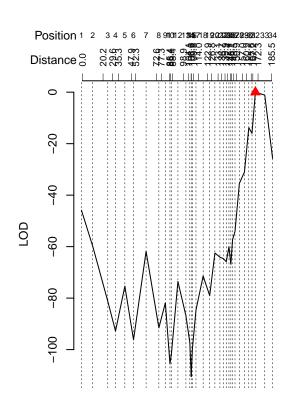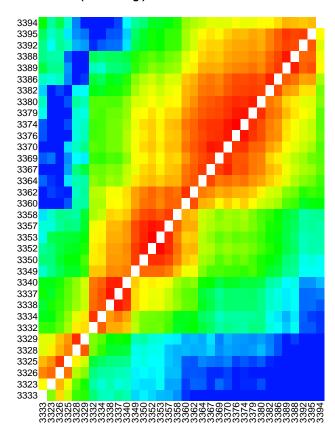
Adding marker 3361 (chrC08_31706135)

Markers · Distance · New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position · Distance

LOD

Frame

Adding marker 3392 (chrC08_36878840)

Markers

Distance

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3393 (chrC08_36932993)

LOD (above diag.) and Recombination Fraction Matrix
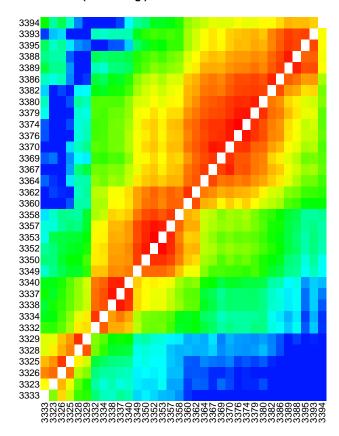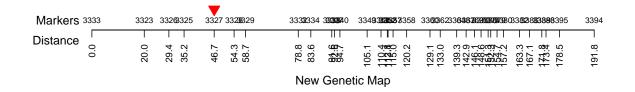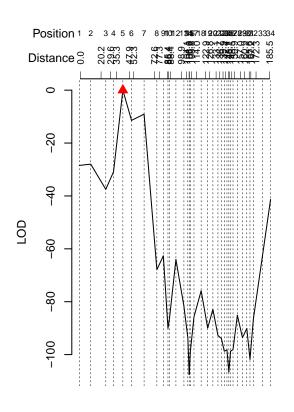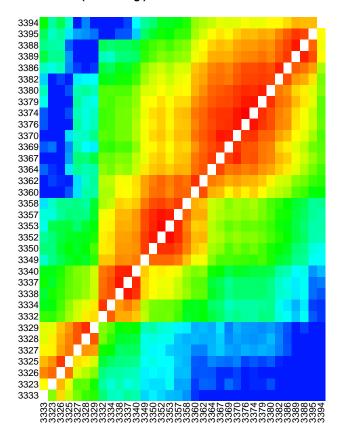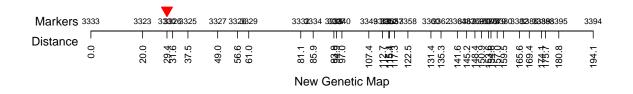
Adding marker 3327 (chrC08_18037143)

Markers

Distance

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3330 (chrC08_2376147)

Markers

Distance

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame
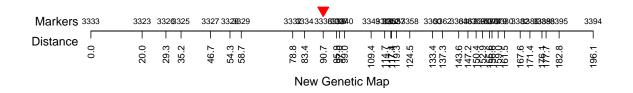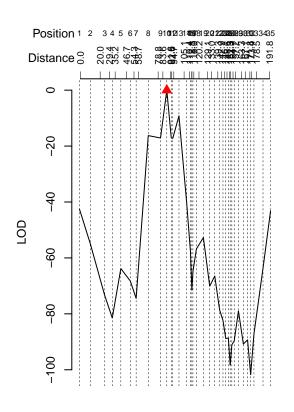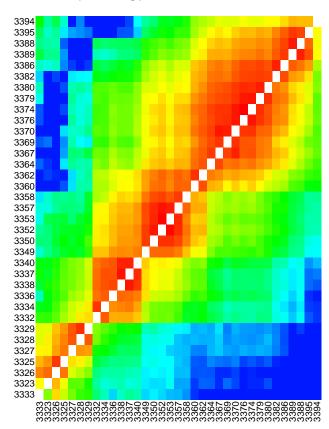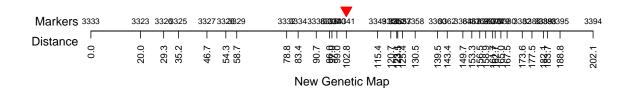
Adding marker 3336 (chrC08_26903249)

Markers: 3333, 3323, 3326, 3325, 3327, 3328, 3329, 3333, 3334, 3336, 3337, 3340, 3349, 3350, 3352, 3357, 3358, 3360, 3362, 3364, 3367, 3369, 3370, 3374, 3376, 3379, 3380, 3382, 3386, 3388, 3395, 3394

Distance: 0.0, 20.0, 29.3, 35.2, 46.7, 54.3, 58.7, 78.8, 83.4, 90.7, 95.8, 99.0, 109.4, 114.7, 119.3, 124.5, 133.4, 137.3, 143.6, 147.2, 150.4, 152.9, 156.0, 159.0, 161.5, 167.6, 171.4, 176.7, 182.8, 196.1

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Frame

Adding marker 3341 (chrC08_27705615)

Markers 3333 3323 3326 3325 3327 3328 3329 3332 3334 3336 3341 3349 3357 3358 3360 3362 3364 3370 3376 3379 3380 3382 3395 3394

Distance 0.0 20.0 29.3 35.2 46.7 54.3 58.7 78.8 83.4 90.7 99.0 102.8 115.4 120.7 125.4 130.5 139.5 143.4 149.7 153.3 158.5 162.7 167.5 173.6 177.5 183.7 188.8 202.1

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

Distance 0.0 20.0 29.3 35.2 46.7 58.7 109.4 142.0 196.1

LOD

Frame

Adding marker 3346 (chrC08_27924569)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3375 (chrC08_33823407)

Markers / Distance / New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

LOD / Frame

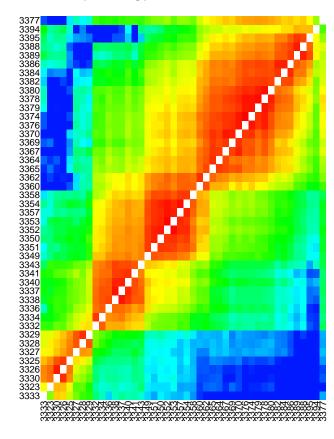# Adding marker 3377 (chrC08_34141406)
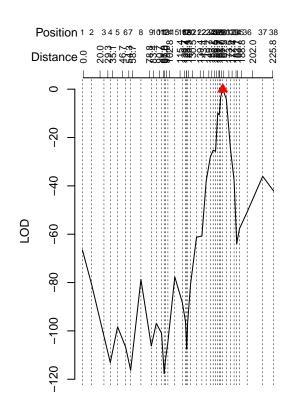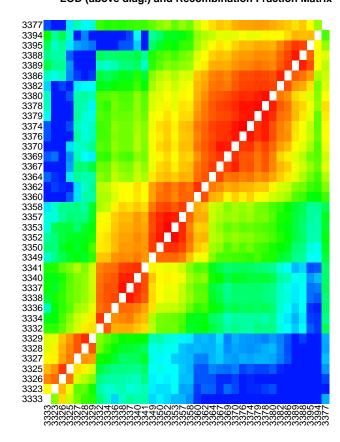
Adding marker 3378 (chrC08_34218294)
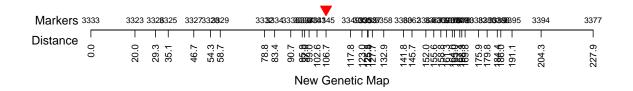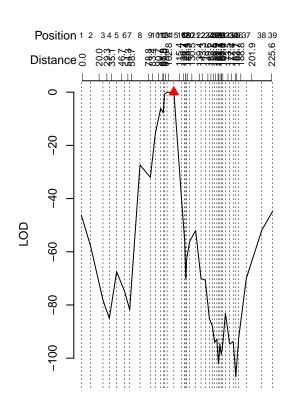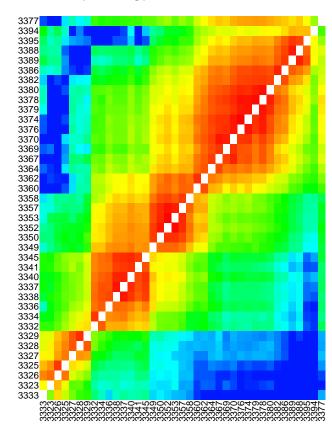
Adding marker 3345 (chrC08_27889552)

Adding marker 3366 (chrC08_33121552)

LOD (above diag.) and Recombination Fraction Matrix

New Genetic Map

Frame
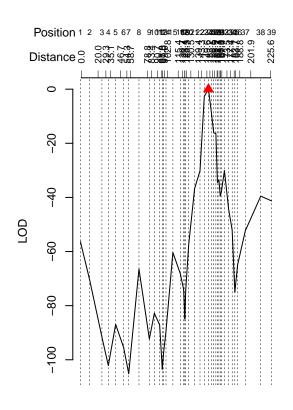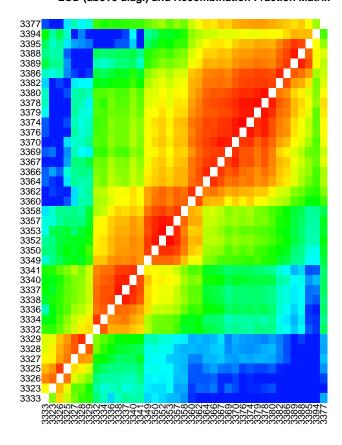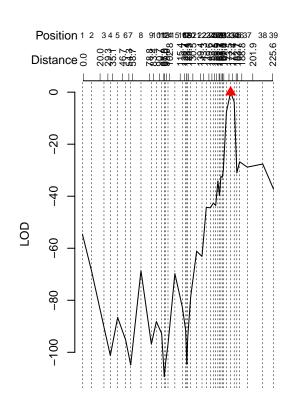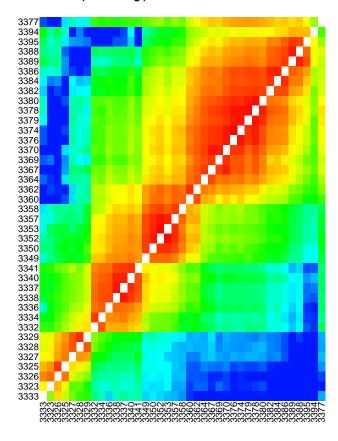
Adding marker 3384 (chrC08_35847626)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3385 (chrC08_35925613)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3390 (chrC08_36866569)

Markers / Distance / New Genetic Map

Position / Distance / LOD / Frame

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3324 (chrC08_14833260)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3330 (chrC08_2376147)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3331 (chrC08_2376826)

Adding marker 3335 (chrC08_25665920)

Adding marker 3339 (chrC08_27611851)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3342 (chrC08_27707160)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3343 (chrC08_27853082)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3344 (chrC08_27889526)

Adding marker 3345 (chrC08_27889552)

Markers

Distance

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3346 (chrC08_27924569)

Markers / Distance / New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position / Distance / LOD / Frame

Adding marker 3347 (chrC08_27957326)

Markers

3333　　　3323 3330 3325　3327 3328 3329　　　333 334 33 3340 3343 343　3340 3347 358 338 3602 364 ... 3395　　3394　　3377

Distance

0.0　19.9　29.4 31.6　37.6　49.1　56.7 61.1　81.2 85.8　93.1 ... 105.4 110.8 115.4　125.5 130.8 135.4 140.6　149.5 153.4　159.7 163.3 ... 179.5　183.4 189.3 195.8 200.7　213.8　237.4

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position　1 2　345 6 78　9 1011 ... 40　41 42

Distance　0.0　19.9 ... 210.2　233.8

LOD

Frame

Adding marker 3348 (chrC08_27957539)

Adding marker 3351 (chrC08_29680701)

Markers | Distance | New Genetic Map

Position | Distance | LOD | Frame

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3354 (chrC08_29951682)

Adding marker 3355 (chrC08_30001023)

Adding marker 3356 (chrC08_30017144)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3359 (chrC08_31451650)

Markers

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3361 (chrC08_31706135)

Markers

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3363 (chrC08_33038870)

Markers: 3333 3323 3326 3325 3327 3328 3329 3323 3343 3343 3395 3458 3306 3363 3395 3394 3377

Distance: 0.0 19.9 29.4 31.6 37.6 49.1 56.7 61.1 81.2 85.8 93.1 105.2 111.8 121.9 126.2 133.4 140.0 148.9 152.8 159.3 160.3 178.1 184.0 189.9 196.5 201.2 214.3 237.9

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position: 1 2 3 4 5 6 7 8 9 10 11 42 43 44

Distance: 0.0 19.9 29.4 37.5 49.1 213.2 236.7

LOD

Frame

Adding marker 3365 (chrC08_33080721)

Markers / Distance / New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

LOD

Frame

Adding marker 3366 (chrC08_33121552)

Markers / Distance / New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Frame

Adding marker 3368 (chrC08_33435757)

Adding marker 3371 (chrC08_33588120)

Adding marker 3372 (chrC08_33595891)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Frame

Adding marker 3373 (chrC08_33822384)

Markers

Distance

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3375 (chrC08_33823407)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3381 (chrC08_34444938)

Adding marker 3383 (chrC08_35403237)

Adding marker 3385 (chrC08_35925613)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3387 (chrC08_35925742)

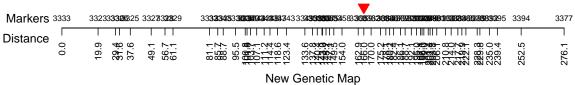Markers

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3390 (chrC08_36866569)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3391 (chrC08_36875001)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3392 (chrC08_36878840)

Markers

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3393 (chrC08_36932993)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3363 (chrC08_33038870)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3372 (chrC08_33595891)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Frame

Adding marker 3383 (chrC08_35403237)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3348 (chrC08_27957539)

Markers

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

LOD

Frame

Adding marker 3392 (chrC08_36878840)

Markers

Distance

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3385 (chrC08_35925613)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3344 (chrC08_27889526)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3335 (chrC08_25665920)

Markers

Distance

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3355 (chrC08_30001023)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

LOD

Frame

Adding marker 3347 (chrC08_27957326)

Markers · Distance · New Genetic Map · LOD (above diag.) and Recombination Fraction Matrix · Position · Distance · LOD · Frame

Adding marker 3359 (chrC08_31451650)

Adding marker 3375 (chrC08_33823407)

Adding marker 3356 (chrC08_30017144)

Markers

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3324 (chrC08_14833260)

LOD (above diag.) and Recombination Fraction Matrix

Markers

New Genetic Map

Position

Distance

LOD

Frame

Adding marker 3366 (chrC08_33121552)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

LOD

Frame

Adding marker 3346 (chrC08_27924569)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3391 (chrC08_36875001)

Adding marker 3345 (chrC08_27889552)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3393 (chrC08_36932993)

Markers

Distance

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Adding marker 3342 (chrC08_27707160)

Adding marker 3331 (chrC08_2376826)
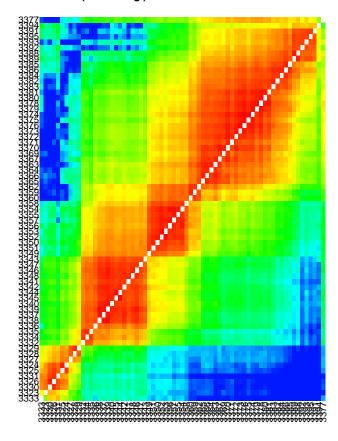

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3339 (chrC08_27611851)
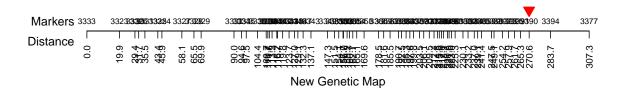
Adding marker 3390 (chrC08_36866569)

LOD (above diag.) and Recombination Fraction Matrix

Adding marker 3361 (chrC08_31706135)

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

LOD

Frame

Adding marker 3368 (chrC08_33435757)

Markers · Distance · New Genetic Map

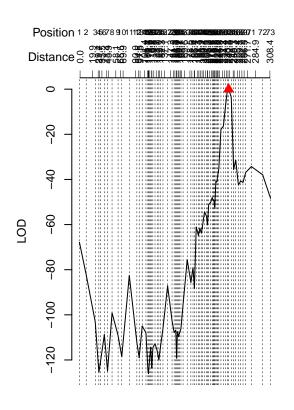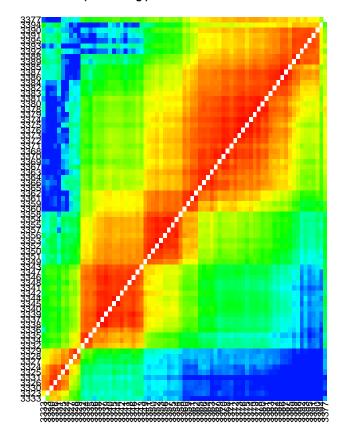LOD (above diag.) and Recombination Fraction Matrix

Position · Distance · LOD · Frame

Adding marker 3387 (chrC08_35925742)

Markers

New Genetic Map

LOD (above diag.) and Recombination Fraction Matrix

Position

Distance

LOD

Frame

Final Genetic Map

LOD (above diag.) and Recombination Fraction Matrix