

CLUSTAL O(1.2.4) multiple sequence alignment

NM_001271820.1	-----CTGTAAGTAGGGGAATCCCCAAACT	26
NM_011640.3	TTTCCCCTCCCACGTGCTCACCTGGCTAAAGTTCTGTAGCTTCAGTTTCATTGGGACCAT	60
NM_000546.6	-----CTCAAAAGTCTAGAGCCACCGT	22
NM_213824.3	-----AAAAGTCCAGGGCCACCAT	19
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NM_001271820.1	CC-----ACGCGGATTGTCTTGTGGATGTCCAATAACCTCCTTGTTTTGGTCAT---	76
NM_011640.3	CCTGGCTGTAGGTAGCGACTACAGTTAGGGGGCACCTAGCATTAGGCCCTCATCCT---	117
NM_000546.6	CCAGGGAGCAGGTAGCTGCTGGGCTCCGGGGACACTTTGCGTTCGGGCTGGGAGCGTGCT	82
NM_213824.3	CCTTGGCGCAGGTAGCTGCTGGTCTCCGGGTACCTGACGTCCCGTCTC-GAGCGTGCA	78
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NM_001271820.1	-----TCTTTAAGTCGATCGACTACATATCCGGG-----	105
NM_011640.3	-----CCTCCTTCCCAGCAGGGTGTACGCTTCTCCGAAGACTGGATGACTG	164
NM_000546.6	TTCCACGACGGTGACACGC--TTCCCTGGATTGGCAGCCAGACTGCCTTCCGGGTCACTG	140
NM_213824.3	TCCCAGGACAGTGACACGCTCTCCTGAGCTTCGGCGGCCACACTCCCCTCCAGGGAGCTG	138
	* * *	
NM_001271820.1	CAATCCGAA-----AGTCGATAATCGTAGTTTAGTGGAGAGGAGGTCG---GCAAAAT	155
NM_011640.3	CCATGGAGGAGTCACAGTCGGATATCAGCCTCGAGCTCCCTCTGAGCCAGGAGACATTTT	224
NM_000546.6	CCATGGAGGAGCCGAGTCAGATCCTAGCGTCGAGCCCCCTCTGAGTCAGGAAACATTTT	200
NM_213824.3	CAATGGAGGAGTCGACGTCCGAGCTGGGCGTGGAGCCCCCTCTGAGTCAGGAGACATTTT	198
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NM_001271820.1	CAA-TTCTTGCAAAGCAATGGCGCAAAACGACAGCCAAGAGTTCGCGGAGCTCTGGGAGA	214
NM_011640.3	CAGGCTTATGGAACTACTTCTCCAGAAGATATCCTGC---CATCACCTCACTGCATGG	281
NM_000546.6	CAGACCTATGGAACTACTTCTGAAAACAACGTTCTGT---CCCCCTTGCCGTCCCAAG	257
NM_213824.3	CAGACTTGTGGAACTGCTTCTGAAAACAACCTGCTGT---CCTCTGAGCTCTCCTGG	255
	** ** * * * *	
NM_001271820.1	AGAATTTGATAA---GTATTCAGCCCCAGGTGGTGGCT---CTTGCT-----GGG	259
NM_011640.3	ACGATC-----TGTTGCTGCCCCAGGATGTTGA-----GGAGTT-----TTTTG	320
NM_000546.6	CAATGGATGATTT---GATGCTGTCCCCGACGATATTGAACAATGGTTCACTGAAGACC	314
NM_213824.3	CAGCAGTGAACGATCTGCTGCTGTCCCCAGTCACGAA-----CTGGCT-----GGATG	303
	* * * * * *	
NM_001271820.1	ACATCATTAATGATGAGGAGTACTTGCCGGGATCGTTTGACCCCAATTTTTTTTG---AA	315
NM_011640.3	AAGGCCCAAGTGAAGCCCTCCGAGTGTCAGGAGCTCCTGCAGCACAGGACCCTGTCACCG	380
NM_000546.6	CAGGTCCAGATGAAGCTCCAGAAATGCCAGAGGCTGCTCCCCCGTGGCCCTGCACCAG	374
NM_213824.3	AAAATCCAGATGACGCTCCAGAGTGC-----CAGCGCCTCCTGCAGCAA	348
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NM_001271820.1	A-----ATGTGCTTGAAGAACAGCCTCAGCCATCCACTCTCCACCAACATCCACTGTTC	370
NM_011640.3	AGACCCTGGGCCAGTGGCCCTGCCCCAGCCACTCCATGGCCCTGTCATCTTTGTCC	440
NM_000546.6	CAGTCTCTACACGGCGGCCCTGCACCAGCCCCCTCTGGCCCTGTCATCTTCTGTCC	434
NM_213824.3	CAGCGCCCGCACCAGCTGCCCCGACCCAGCCACCTCTGGCCCTGTCGTCTTTGTCC	408
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NM_001271820.1	CGGAGACAAGCGACTATCCCGGCGATCATGGATTTAGGCTCAGGTTCCCGCAGTCTGGCA	430
NM_011640.3	CTTCTCAAAAACCTTACCAGGGCAACTATGGCTTCCACCTGGGCTTCCTGCAGTCTGGGA	500
NM_000546.6	CTTCCGAGAAAACCTACCAGGGCAGCTACGGTTTCCGTCTGGGCTTCTTGCACTCTGGGA	494
NM_213824.3	CTTCTCAGAAGACCTACCCTGGCAGCTATGATTTCCGTCTAGGGTTCTTGCACTCTGGAA	468
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NM_001271820.1	CAGCAAAATCTGTAACCTGCACTTATTCACCGGACCTGAATAAACTCTTCTGTGAGCTGG	490
NM_011640.3	CAGCCAAGTCTGTTATGTGCACGTACTCTCCTCCCTCAATAAGCTATTCTGCCAGCTGG	560
NM_000546.6	CAGCCAAGTCTGTGACTTGCACGTACTCCCTGCCCTCAACAAGATGTTTTGCCAACTGG	554
NM_213824.3	CAGCCAAGTCTGTAACCTGCACGTACTCCCTGCCCTCAATAAGCTGTTTTGCCAGCTGG	528
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NM_001271820.1	CAAAAACCTTGCCCCGTTCAAATGGTGGTGGACGTTGCCCTCCACAGGGCTCCGTGGTTC	550
NM_011640.3	CGAAGACGTGCCCTGTGCAGTTGTGGGTGAGCGCCACACCTCCAGCTGGGAGCCGTGTCC	620
NM_000546.6	CCAAGACCTGCCCTGTGCAGCTGTGGGTGATTCCACACCCCCGCCCCGACCCGCGTCC	614
NM_213824.3	CCAAGACCTGCCCGGTGCAGCTGTGGGTGAGCTCGCCACCCCCGCTGGCACCCTGTCC	588
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NM_001271820.1	GAGCCACTGCCATCTATAAGAAGTCCGAGCATGTGGCTGAAGTGGTCCGAGATGCCCCC	610
NM_011640.3	GCGCCATGGCCATCTACAAGAAGTCACAGCACATGACGGAGGTCGTGAGACGCTGCCCCC	680
NM_000546.6	GCGCCATGGCCATCTACAAGCAGTCACAGCACATGACGGAGGTTGTGAGGCGCTGCCCCC	674
NM_213824.3	GCGCCATGGCCATCTACAAGAAGTCAGAGTACATGACCGAGGTGGTGAGGCGCTGTCCCC * **** *	648
NM_001271820.1	ATCATGAGCGAACCCC--GGATGGAGATAACTTGGCGCTGCTGGTCATTTGATAAGAG	667
NM_011640.3	ACCATGAGCGCTGCTC--CGATGGTGATGGCCTGGCTCCTCCCCAGCATCTTATCCGGG	737
NM_000546.6	ACCATGAGCGCTGCTC--AGATAGCGATGGTCTGGCCCTCCTCAGCATCTTATCCGAG	731
NM_213824.3	ACCATGAGCGCAGCTCTGACTATAGCGATGGTCTGGCCCTCCCCAGCATCTCATCCGGG *	708
NM_001271820.1	TGGAGGGCAATCAGCGAGCAAATTACAGGGAAGATAACATCACTTTAAGGCATAGTGTTT	727
NM_011640.3	TGGAAGGAAATTTGTATCCCGAGTATCTGGAAGACAGGCAGACTTTTCGCCACAGCGTGG	797
NM_000546.6	TGGAAGGAAATTTGCGTGTGGAGTATTTGGATGACAGAAACACTTTTCGACATAGTGTGG	791
NM_213824.3	TGGAAGGGAATTTACGGGCCGAGTACTTGGATGACAGAAACACTTTTCGACACAGCGTTG **** *	768
NM_001271820.1	TTGTCCCATATGAAGCACCACAGCTTGGTGCTGAATGGACAACTGTGCTACTAAACTACA	787
NM_011640.3	TGGTACCTTATGAGCCACCCGAGCCGGCTCTGAGTATACCACCATCCACTACAAGTACA	857
NM_000546.6	TGGTGCCCTATGAGCCGCTGAGTTGGCTCTGACTGTACCACCATCCACTACAAGTACA	851
NM_213824.3	TGGTGCCCTACGAGCCGCCGAGGTGCGCTCTGACTGTACCACCATCCACTACAAGTACA *	828
NM_001271820.1	TGTGCAATAGCAGCTGCATGGGGGGGATGAACCGCAGGCCCATCCTCACAATCATCACTC	847
NM_011640.3	TGTGTAATAGCTCCTGCATGGGGGGCATGAACCGCGGACCTATCCTTACCATCATCACAC	917
NM_000546.6	TGTGTAACAGTTCCTGCATGGGCGGCATGAACCGGAGGCCCATCCTCACCATCATCACAC	911
NM_213824.3	TGTGTAACAGCTCCTGCATGGGGGGCATGAACCGCGGCCCCATCCTCACCATCATCACAC **** *	888
NM_001271820.1	TGGAGACTCAGGAAGGTCAGTTGCTGGGCGGAGGTCTTTTGAGGTGCGTGTGTGTCAT	907
NM_011640.3	TGGAAGACTCCAGTGGGAACCTTCTGGGACGGGACAGCTTTGAGGTTCGTGTTTGTGCCT	977
NM_000546.6	TGGAAGACTCCAGTGGTAATCTACTGGGACGGAACAGCTTTGAGGTGCGTGTGTGTGCCT	971
NM_213824.3	TGGAAGATGCCAGTGGCAACTTGCTGGGACGGAACAGCTTTGAGGTGCGTGTGTGTGCCT **** *	948
NM_001271820.1	GTCCAGGCAGAGACAGGAAAACCTGAGGAGAGCAACTTCAAGAAAGACCAAGAGACCAAAA	967
NM_011640.3	GCCCTGGGAGAGACCGCGTACAGAAGAAGAAAATTTCCGCAAAAAGGAAGTCTTTGCC	1037
NM_000546.6	GTCCTGGGAGAGACCGGCGCACAGAGGAAGAGAATCTCCGCAAGAAAGGGGAGCCTCACC	1031
NM_213824.3	GTCCTGGGAGAGACCGCGCACAGAGGAAGAAAATTTCTCAAGAAAGGGCCAATCTTGCC *	1008
NM_001271820.1	CCATGGCCAAAACCACTGGGACCAACGTAGTTTGGTGAAAGAATCTTCTTCAGCTA	1027
NM_011640.3	CTGAAGTGGCCCCAGGGA--GCACAAAGAGAGCGCTGCCCA----CCTGCACAAGCGC	1089
NM_000546.6	ACGAGCTGGCCCCAGGGA--GCACTAAGCGAGCACTGCCCA----ACAACACCAGCTC	1083
NM_213824.3	CCGAGCCTCCCCCTGGCA--GCACTAAGCGAGCACTGCCCA----CCAGCACCAGCTC *	1060
NM_001271820.1	CATTACGACCTGAGGGGAGCAAAAAGGCCAAGGGCTCCAGCAGCGATGAGGAGATCTTTA	1087
NM_011640.3	-----CTCTCCCCGCAAAAGAAAA-----AACCACCTTGATGGAGAGTATTTCA	1133
NM_000546.6	-----CTCTCCCCAGCCAAAGAAGA-----AACCACCTGGATGGAGAATATTTCA	1127
NM_213824.3	-----CTCGCCAGTGCAAAAGAAGA-----AGCCACTGGATGGCGAGTATTTCA *	1104
NM_001271820.1	CCCTGCAGGTGAGGGGCAGGGAGCGTTATGAAATTTTAAAGAAATTGAACGACAGTCTGG	1147
NM_011640.3	CCCTCAAGATCCGCGGGCGTAAACGCTTCGAGATGTTCCGGGAGCTGAATGAGGCCTTAG	1193
NM_000546.6	CCCTTCAGATCCGTGGGCGTGAGCGCTTCGAGATGTTCCGAGAGCTGAATGAGGCCTTAG	1187
NM_213824.3	CCCTCCAGATCCGTGGGCGTGAACGCTTCGAGATGTTCCGAGAGCTGAATGACGCCTTAG **** *	1164
NM_001271820.1	AGTTAAGTGATGTGGTGCCTGCCTCAGATGCTGAAAAGTATCGTCAGAAATTCATGACAA	1207
NM_011640.3	AGTTAAAGGATGCCCATGCTACAGAGGAGTCTGGAGACAGCAGGGCTCACTCCAGCTACC	1253
NM_000546.6	AACTCAAGGATGCCCAGGCTGGGAAGGAGCCAGGGGGGAGCAGGGCTCACTCCAGCCACC	1247
NM_213824.3	AGCTGAAGGATGCCCAGATGCGCGGGAGTCGGGGGAAAACAGGGCCCACTCCAGCCACC *	1224
NM_001271820.1	AAAACAAAA-----AAGAGAATCGTGAATCATCTGA	1238
NM_011640.3	TGAAGACCAAGAAGGGCCAGTCTACTTCCCGCCATAAAAAACAATGGTCAAGAAAGTGG	1313
NM_000546.6	TGAAGTCCAAAAAGGGTCAGTCTACCTCCCGCCATAAAAAACTCATGTTCAAGACAGAAG	1307

NM_213824.3	TGAAGTCTAAGAAGGGGCAGTCTCCCTCCCGCCATAAAAAACCGATGTTCAAGAGAGAAG ** * ** ** *	1284
NM_001271820.1	GCCCAAAACAGGGAAAGAAG----CTGATGGTGAAGGAC-GAAGGAAGAAG-----	1283
NM_011640.3	GGCCTGACTCAGACTGACTGCCTCTGCATCCCGTCCCCATCACCAGCCTCCCCCTCTCCT	1373
NM_000546.6	GGCCTGACTCAGACTGACATTCTCCACTTCTTGTCCCCACTGACAGCCTCCCACCCCCA	1367
NM_213824.3	GACCTGACTCAGACTGATGCCTCTGCATCCCATCCCTTTTGAAGT----- * ** ** ** *	1331
NM_001271820.1	-----CGACTCTGATTAAGGTGATGGGATGCTAAGAGAGA-----AAGAAACTGG	1328
NM_011640.3	TGCTGTC-----TTATGACTTCAGGGCTGAGACACAATCCTCCCGGTC-----	1416
NM_000546.6	TCTCTCCCTCCCTGCCATTTTGGGTTTTGGGTCTTTGAACCTTGCTTGCAATAGGTGT	1427
NM_213824.3	-----CCCTGGCATTTTGGGGACTCAGGTGCTTAGACCTCTGCTTGGTGCAGGTGT * * * *	1382
NM_001271820.1	GAGTTTTGCTCTTTTTGGACTGCCTTTTTTGCTTTTAT-----TACACCAAAAAAAAA	1380
NM_011640.3	-----CCTTCTGCTGCCTTTTTTACCTTGAGCTAGGGCTCAGCCCCCTCTCT	1464
NM_000546.6	GCGTCAGAAGCACCCAGGACTTCCATTT--GCTT-TGTCCCGGGCTCCACTGAACAAGT	1484
NM_213824.3	GCCTTAGAAATGCCCTGGAATTCCTCTATATGCT-TGGCCTGGGGCTCTGCTAAAGAAAT * ** * *	1441
NM_001271820.1	AAGCTTGTC-ACAGGGGTCAATTTGGGGA-----	1407
NM_011640.3	GAGTAGTGGTTCCTGGCCCAAGTTGGGGAATAGGTTGATAGTTGTCAG-GTCTCTGCTGG	1523
NM_000546.6	TGGCCTGCACTGGTGTGTTTGTGTTGGGGAGGAGGATGGGGAGTAGGAC-----	1532
NM_213824.3	TGGCCTGCACTGGTGGGTTGCGGGGGTGGGGGTGGGGGTGGATAAGGGGTACTGGGGG * * **	1501
NM_001271820.1	-ACT---GCGATACATGTGATCCATTAGTCCTGTTTG-----	1440
NM_011640.3	CCCAGCGAAATTCTATCCAGCCAGTTGTTGGACCCTGGCACCTACAAT-----	1571
NM_000546.6	-ATA-CCAGCTTAGATTTTAA-GGTTTTTACTGTGAGGGATGTTTGGGAGATGTAAGAAA	1589
NM_213824.3	CCTT-CCGGCTTAGCTTTTTAAGGGTTTTTGTATTT---TTTTATTAAATTTTTTTCA * * * *	1556
NM_001271820.1	-----TCATGTTTCTTCTTGTCTCACTCCACTGGGACCTTTGTTGCTGGACACTGATTTT	1494
NM_011640.3	-----GAAATCTCACCTACCCACACCCTGTAAGATTCTATCTTGGGCCCTCATAGG	1624
NM_000546.6	TGTTCTTGCAAGTTAAGGGTTAGTTTACAATCAGCCACATTCTAGGTAGGGGCCCACTTCA	1649
NM_213824.3	TTTTTTTAAAGTTTAAAGTATAGTTGCTGTTCCGTGTGTT-----TTAA * *	1602
NM_001271820.1	GC-AGTGTTTTACCAGCACTGGCG-----AGGGCTAA--GACTAGCCTGACGTTTTACAG	1546
NM_011640.3	GTCCATATCCTCCAGGGCCTACTTTCCTTCCATTCTGCAAAGCCTGTCTGCATTATCCA	1684
NM_000546.6	C--CGTACTAACC-AGGGAAGCTGTCCCTCACTGTTG--AATTTTCTCTAACTTCAAGGC	1704
NM_213824.3	---AGGGTTTTAT-TGGTAAATGTTTCAGAGAGGTAGGAAAATGTTTCTGCGTATCAGGA * * *	1658
NM_001271820.1	ACCCGTT---AAATGAACGTTTCAGGAACGAAGTTTACCTGTGACTTTTGTAATTGTAA	1602
NM_011640.3	CCCC-----CCACCCTGTCTCCCTCTT--T-TTTTTTTTTTACCCTTTT	1727
NM_000546.6	CCATATCTGTGAAATGCTGGCATTTCACCTACCTCACA-GAGTGCATTGTGAGGGTTAA	1763
NM_213824.3	ACAGGTTACCACCAGCCATACACTGGGTCGGA-----AGCCAGTTCTCCACCGTAA * * ** *	1710
NM_001271820.1	TAATGCCAGTATTCGGTTGTTTTGT-AAGCAGCAT-----	1636
NM_011640.3	T-----	1728
NM_000546.6	TGAAATAATGTACATCTGGCCTTGA-AACCACCTTTATTACATGGGGTCTAGAACTTGA	1822
NM_213824.3	TAGGCAGAAGAGTGCCTTTCCTGATAACCTCCCTCCCCATGCTGGTTGGGAGAATTT-A *	1769
NM_001271820.1	-----TTTTTTTTATTTTATAAAGAAATGAGTATTAGACTAATTGGAACAAA	1684
NM_011640.3	-----ATATATCAATTTCTATT--TTACAATAAA	1756
NM_000546.6	CCCCCTTGAGGGTGCTTGTTCCTCTCCCTGTTGGTCGGTGGGTGGT--AGTTTCTACA	1880
NM_213824.3	TGAAATAATGT-ATTGTTTCTTTTATATGT-----TTCTTATT--TTCCAATAAA * * *	1818
NM_001271820.1	CCATCGGAATTGGTT-GCAAGCCGATTATGTAA---TAAAAATACCAAAGCAAAACCGTT	1740
NM_011640.3	ATTTTGTATCACTTAAAAAAAAA-----	1781
NM_000546.6	GTTGGGCAGCTGGTTAGGTAGAGGGAGTTGTCAAGTCTCTGCTGGCCAGCCAAACCTG	1940
NM_213824.3	ATA----GTGTGGTAGCAAAAAAAAAAAAAAAAAA----- * *	1849

NM_001271820.1	TTGTATCTTATATTTTTTTATGTTAATTACTGCTGTTCTATTTTTGTATTTTAGCTAAT	1800
NM_011640.3	-----	1781
NM_000546.6	TCTGACAACCTCTTGGTGAACCTTAGTACC-----TAAAAGGAAATCTCACCCCAT	1991
NM_213824.3	-----	1849
NM_001271820.1	AAGAGAAGCTGCC-----CTTTATAACACGCTTTTAGATTTAGTACAACCATTGTT	1851
NM_011640.3	-----	1781
NM_000546.6	CCCACACCCTGGAGGATTTTCATCTCTTGTATATGATGATCTGGATCCACCAAGACTTGTT	2051
NM_213824.3	-----	1849
NM_001271820.1	--CTTTTTCAATTGAAGTAGTTGTTGATTTACTCTTGTGATTGTTGTTGAGTAATGTGGC	1909
NM_011640.3	-----	1781
NM_000546.6	TTATGCTCAGGGTCAATTTCTTTTTCTTTTTTTTTTTTTTTTTTCT--TTTTCTTTGAG	2109
NM_213824.3	-----	1849
NM_001271820.1	ACAGATAAGCTCATAAGTGGCCAGTCTGTTTTGACATGTGCTTGTGCAAATGGTTATGGA	1969
NM_011640.3	-----	1781
NM_000546.6	ACTGGGTCTCGCTTTGTTGCCAGGCTGGAGTGGAGTGGCGTGAT-CTTGGCTTACTGCA	2168
NM_213824.3	-----	1849
NM_001271820.1	TTGGATGTCTAAATATGAGCAAATGAAATGTCAAATACTCAGGGCA----TGTACAAGTC	2025
NM_011640.3	-----	1781
NM_000546.6	GCCTTTGCCTCCCCGGCTCGAGCAGTCCTGCCTCAGCCTCCGGAGTAGCTGGGACCACAG	2228
NM_213824.3	-----	1849
NM_001271820.1	CCTCCTGGAAATCTTGATAAACTCTTCTACTGTTTTACCTGCTATAGA-----TTT	2077
NM_011640.3	-----	1781
NM_000546.6	GTTTCATGCCACCATGGCCAGCCAACCTTTGCATGTTTTGTAGAGATGGGGTCTCACAGTG	2288
NM_213824.3	-----	1849
NM_001271820.1	TATGCTGGTTTTGTTTCTTATTACTGTTTACACGCATTTGCCTTTTATAAATATATAAGC	2137
NM_011640.3	-----	1781
NM_000546.6	TTGCCAGGCTGGTCTCAAACCTCTGGGCTCAGGCGATCCACCTGTCTCAGCCTCCCAGA	2348
NM_213824.3	-----	1849
NM_001271820.1	GT-----	2139
NM_011640.3	-----	1781
NM_000546.6	GTGCTGGGATTACAATTGTGAGCCACCACGTCCAGCTGGAAGGGTCAACATCTTTTACAT	2408
NM_213824.3	-----	1849
NM_001271820.1	-----GCATTTATTTGTAGCTAGCTGAATCATTTATAATTTTTCTTTTTAAGAG	2188
NM_011640.3	-----	1781
NM_000546.6	TCTGCAAGCACATCTGCATTTTCACCCACCCTTCCCTCC---TTCTCCCTTTTATAT	2465
NM_213824.3	-----	1849
NM_001271820.1	AAATGTTTTAAATACACTCTTTAAAAAAAAAAAAAAAAAAAAAAAAAAAA	2236
NM_011640.3	-----	1781
NM_000546.6	CCCATTTTATATCGATCTCTTATTTTACAATAAACTTTGCTGCCA-	2512
NM_213824.3	-----	1849