






logo		
Father	.....CTTTGT.TGCCTTCTACAAAA	20
Mother	.....	0
Sister	TAAACTTTTCATGCACACGTTGTGCGAGTCAGTCCATACCCAAACAACACCTTTTCTTGCCGCCTTTAGAGAGGAGGGAGGGAGGTTTCCTGCAAGCAGTCTTTTCGGTATGTCTCACTCCAAA	120
Brother	.....	0
Proband	.....TCCTGCACTGCAAAGAGCAATGGGAGAGCAGGTCCCTGCAAGCAGC..ATCCTGTATGGCTCCGTACAAA	68
RefSeq	.....	0

logo		
Father	AAACAAAAAATATTTTTTT.TGTGGGAAGCCCCA...CGCACACTCCTCCCGGGGGG...GCTA.CAGAACCTCAGGTTCGGTTCCTTCCCTCCGG.GTGAAGTCTGGACGTCAGTTCA	131
Mother	.....CGATGATGGTCTCTCCTACGAGGGCGAGGGGT...GAGGTAAGCTCC	44
Sister	GAGCAATGAGTAGTTTCTTGCGTTGAGTAAACACAA.GCGCACATCTCTCCAGAAGATGAGCTAACGTAACGTGGGTGGGTTCTCCATCTCGGTGTGGGTTCGTGGTGG..AGTCCT	237
Brother	.....	0
Proband	AAGCGATGCTGAGTTATTCGTCTGAGTCAGCTGCAATGCCAGCTCACCTGCCGTGAGTTACGCTAACG...TGCGAGTAGGTTTCATCAGAGG..TGAGGTGGGGTGAGTGAGTCAT	182
RefSeq	.....	0

logo		
Father	TTGTGGA.GGCATATCCAATAATACCT.CCCAGGCAGGCACACTTCTTTCTC..AGAGACAGACAGAGGATGAG.TGAGCTCAGTCAAGCGGGCTGCTTTCTGTCTCAGGGGAGGG	246
Mother	TTTTTG..GACGCTGTTTATAATTATTCCCTCTGGC.GGCCACACTTCTTTCTCC..CTGAGAAGCT.ATGGATGTC.GACCTCAGTCAACCGAGGAGCTTTCTGTCTGAG.GGAGGG	156
Sister	TTGTGGATGGCACATCCAACAATAACTACCCACGCGGGCACACTTTTCTTTCTCTCAGTGAGAGGCTGAGGATGAGATGAGCTCAGTCAAGCGGGCTGCTTTCTGTCTCAGTGAGGG	357
Brother	.....	0
Proband	TTT.....ACGGAGCC.ATCATAACT.ACACACACAGCCACACACTCCTTCG.....AGACAGACAGAGTGATGGG.TAAGGTCAGTCAAGCGGGGAGGCTT.CTGTCTGGTGAGGG	286
RefSeq	.....	0

logo		
Father	GGAAGGG.TTCATTCCGGCAAGCAAGGCAGGCAGCGTTGTTGGAGGGGGGGGGGAGGAGCGGAGA.GTGAGTGG.GGGAGGCGTGAG.CAACCAACCCAGCCCTGCCACAACCCATA	362
Mother	GGAAGAGGATCTTTCGGGCAGTCAAGGGAGGCGCGCTTCATTGGAGAAAAAGGGAGGCGAGCGAATAATAGAGG.GACGCCCGAAG.TGACAAGGCAAGCCCATCCACTATCGAGA	274
Sister	GGGAGGGGTTTCATTCCGGCAATCAAGGCAGAGAGCGCTTCATTGGAGAGAGGGGGGAGGAGCGGACA.GTCAGTGG.GGGGCGCG.GAG.CAGCCAGCCCATCCCTAGTCACTAGCCATA	473
Brother	.....	0
Proband	AGAAGGGAACC..TTCCGGCAGGCGAGGGAGGGGGCGGTGCGTTGAGGGAGGGGGAGGAGGAGAGA.GTGAGTGGAGGCACGCGCGAGGTGAGAAAGCCCTGCTCTATCGACAGCCAGA	403
RefSeq	.....	0

logo		
Father	CTCATTCC.TGACCTTGCTGGCTGCCTCCATTTTATATAA..AGCTATGGAACAGAGGGGCCA.CA.TGTGCTCTGGC..TGATATGTACATGCACATGTCCTCTCTTGTGTTCC	475
Mother	GTCATTCCGTTCAAGCCCGAGCTGCAAACAGATTGAAAAAT..ACCTATAGAAAAATGAGGGGTCACCA.TGTGCTCTGGGCA...GAATATGACACAGGGGATGTCGCTCTCTGTTTCC	388
Sister	CTCATTCC.TGAGCTTGCTGGCGCATCCAATTTAAATAT..AGGTATGGAACAGAGGGAAAAA.CA.TGTTGCTCTGGGGGCTATATGACACATGCACATGTCCTCTCTTGTGTTCC	589
Brother	.....TGTTGCTCTCTGTTTCC	18
Proband	CTCATTCCG.TGAGCTTCGGGGCGCTCCTTTATTGATAGGGTAAGCAACAGAGGGGGGCA.CA.TGTGCTCTCTGGGGGCTCTATGACACATGCACATGTCCTCTCTGTTTCC	522
RefSeq	.....	0

logo	ATAGCTTTAAATAAAATGGGGCCAGCAAGGAAGCTCAGGAATGGGCTTTGGCAATGGCAAGGCCTTGGCTCACCTCGGGCCTCCTCTGAGTCTCTGTCCCGCTCCTCCTCCTCTTCT	
Father	ATAGCTTTAAATAAAATGGGGCCAGCAAGGAAGCTCAGGAATGGGTCTTGGCAATGGCAAGGCTTTGCTGCTCACCTCGGGCCTCCTCTGAGTCTCTGTCCCGCTCCTCCTCCTCTTCT	595
Mother	ATAGCTTTAAATAAAATGGGGCCAGCAAGGAAGCTCAGGAATGGGTCTTGGCAATGGCAAGGCTTTGCTGCTCACCTCGGGCCTCCTCTGAGTCTCTGTCCCGCTCCTCCTCCTCTTCT	508
Sister	ATAGCTTTAAATAAAATGGGGCCAGCAAGGAAGCTCAGGAATGGGTCTTGGCAATGGCAAGGCTTTGCTGCTCACCTCGGGCCTCCTCTGAGTCTCTGTCCCGCTCCTCCTCCTCTTCT	709
Brother	ATAGCTTTAAATAAAATGGGGCCAGCAAGGAAGCTCAGGAATGGGTCTTGGCAATGGCAAGGCTTTGCTGCTCACCTCGGGCCTCCTCTGAGTCTCTGTCCCGCTCCTCCTCCTCTTCT	138
Proband	ATAGCTTTAAATAAAATGGGGCCAGCAAGGAAGCTCAGGAATGGGCTTGGCAATGGCAAGGCTTTGCTGCTCACCTCGGGCCTCCTCTGAGTCTCTGTCCCGCTCCTCCTCCTCTTCT	642
RefSeq	.....	0

logo	CGAATGCCCCCTGCCCTCCATTGCCGCCAGGAATGTTCCCCCTTTCCCCTGAGCCGGAGAGCATGCCCTGGGCCTTGACGGTGCTCATCCCTCAACTTGTCTCTCAAGGAGAAAGTGTGTGG	
Father	CGAATGCCCTCTGCCTCCATTGCCGCCAGGAATGTTCCCCCTTTCCCCTGAGCCGGAGAGCATGCCCTGGGCCTTGACGGTGCTCATCCCTCAACTTGTCTCTCAAGGAGAAAGTGTGTGG	715
Mother	CGAATGCCCTCTGCCTCCATTGCCGCCAGGAATGTTCCCCCTTTCCCCTGAGCCGGAGAGCATGCCCTGGGCCTTGACGGTGCTCATCCCTCAACTTGTCTCTCAAGGAGAAAGTGTGTGG	628
Sister	CGAATGCCCTCTGCCTCCATTGCCGCCAGGAATGTTCCCCCTTTCCCCTGAGCCGGAGAGCATGCCCTGGGCCTTGACGGTGCTCATCCCTCAACTTGTCTCTCAAGGAGAAAGTGTGTGG	829
Brother	CGAATGCCCTCTGCCTCCATTGCCGCCAGGAATGTTCCCCCTTTCCCCTGAGCCAGAGAGCATGTCCTGGGCCTTGACGGTGCTCATCCCTCAACTTGTCTCTCAAGGAGAAAGTGTGTGG	258
Proband	CGAATGCCCTCTGCCTCCATTGCCGCCAGGAATGTTCCCCCTTTCCCCTGAGCCGGAGAGCATGCCCTGGGCCTTGACGGTGCTCATCCCTCAACTTGTCTCTCAAGGAGAAAGTGTGTGG	762
RefSeq	.....GAGAAAGTGTGTGG	14

logo	CCTGTGTGGGAATTTTGATGGCATCCAGAACAATGACCTCACCAGCAGCAACCTCCAAGTGGAGGAAGACCCTGTGGACTTTGGGAACTCCTGGAAAAGTGAGCTCGCAGTGTGCTGACAC	
Father	CCTGTGTGGGAATTTTGATGGCATCCAGAACAATGACCTCACCAGCAGCAACCTCCAAGTGGAGGAAGACCCTGTGGACTTTGGGAACTCCTGGAAAAGTGAGCTCGCAGTGTGCTGACAC	835
Mother	CCTGTGTGGGAATTTTGATGGCATCCAGAACAATGACCTCACCAGCAGCAACCTCCAAGTGGAGGAAGACCCTGTGGACTTTGGGAACTCCTGGAAAAGTGAGCTCGCAGTGTGCTGACAC	748
Sister	CCTGTGTGGGAATTTTGATGGCATCCAGAACAATGACCTCACCAGCAGCAACCTCCAAGTGGAGGAAGACCCTGTGGACTTTGGGAACTCCTGGAAAAGTGAGCTCGCAGTGTGCTGACAC	949
Brother	CCTGTGTGGGAATTTTGATGGCATCCAGAACAATGACCTCACCAGCAGCAACCTCCAAGTGGAGGAAGACCCTGTGGACTTTGGGAACTCCTGGAAAAGTGAGCTCGCAGTGTGCTGACAC	378
Proband	CCTGTGTGGGAATTTTGATGGCATCCAGAACAATGACCTCACCAGCAGCAACCTCCAAGTGGAGGAAGACCCTGTGGACTTTGGGAACTCCTGGAAAAGTGAGCTCGCAGTGTGCTGACAC	882
RefSeq	CCTGTGTGGGAATTTTGATGGCATCCAGAACAATGACCTCACCAGCAGCAACCTCCAAGTGGAGGAAGACCCTGTGGACTTTGGGAACTCCTGGAAAAGTGAGCTCGCAGTGTGCTGACAC	134

logo	CAGAAAAGTACGTCTGGGTCTCTGTGTGGACAGAGCCCAGAGCCTTGCCTTGGAAATGTCCCTCTGTCCCCATGTCATGGGCTGAAAGGGCT	
Father	CAGAAAAGTACGTCTGGGTCTCTGTGTGGACAGAGCCCAGAGCCTTGCCTTGGAAATGTCCCTCTGTCCCCATGTCATGGGCTGAAAGGGAGTG	931
Mother	CAGAAAAGTACGTCTGGGTCTCTGTGTGGACAGAGCCCAGAGCCTTGCCTTGGAAATGTCCCTCTGTCCCCATGTCATGGGCTGAAAGCTA...	840
Sister	CAGAAAAGTACGTCTGGGTCTCTGTGTGGACAGAGCCCAGAGCCTTGCCTTGGAAATGTCCCTCTGTCCCCATGTCATGGGCTGAAAGGGGTA	1044
Brother	CAGAAAAGTACGTCTGGGTCTCTGTGTGGACAGAGCCCAGAGCCTTGCCTTGGAAATGTCCCTCTGTCCCCATGTCATGGGCTGAAATGGGGTTA	474
Proband	CAGAAAAGTACGTCTGGGTCTCTGTGTGGACAGAGCCCAGAGCCTTGCCTTGGAAATGTCCCTCTGTCCCCATGTCATGGGCTGAAACGGGCGT	978
RefSeq	CAGAAAA.....	141

X

non conserved

X

≥ 50% conserved