Multiple sequence alignment (logo, Father pri/sec, Mother pri/sec, Sister pri/sec, Brother pri/sec, Proband pri/sec, RefSeq).

Block 1

```
logo
Father pri  .TGGGGATC.CGCATGGTAGATTACAAGCTATGTGGCTACCAC.CTTTCTGAGAGCCATTAGAACCTCACAACCT..CCTTTCAGCCTGCTTTTGTTTGCCTGTGAGGCTCTGTCAGTAG   115
Father sec  .TAATWTGC.CGCATGGTAGATTACAAGCTATGTGGCGACCAC.CTTTCTGAGAGCCATTAGAACCTCACAACCT..CCTTTCAGCCTGCTTTTGTTTGCCTGTGAGGCTCTGTCAGTAG   115
Mother pri  ......CGT.CGCATGCTAG.TTACAAGCTATGTGGCAACCAC.CTTTCTGAGAGCCATTAGAACCTCACAACCT..CCTTTCAGCCTGCTTTTGTTTGCCTGTGAGGCTCTGTCAG.AG   108
Mother sec  .......CGTCACATGC.TAG.TTACAAGCTATGTGGCAACCAC.CTTTCTGAGAGCCATTAGAACCTCACAACCT..CCTTTCAGCCTGCTTTTGTTTGCCTGTGAGGCTCTGTCAG.AG   108
Sister pri  ..GGTAAAGACGCATGCTAG.TTACAAGCAATGTGGCTACCAC.CTTTCTGAGAGCCATTAGAACCTCACAACCT..CCTTTCAGCCTGCTTTTGTTTGCCTGTGAGGCTCTGTCAG.AG   113
Sister sec  ..AMSKACGTCGCATGATAGTTACAA.GCAATGTGGCTACCAC.CTTTCTGAGAGCCATTAGAACCTCACAACCT..CCTTTCAGCCTGCTTTTGTTTGCCTGTGAGGCTCTGTCAG.AG   113
Brother pri ..AGGAACG.CGCATGATAGATTACAAGCTATGTGGCTACCAC.CTTTCTGAGAGCCATTAGAACCTCACAACCT..CCTTTCAGCCTGCTTTTGTTTGCCTGTGAGGCTCTGTCAG.AG   113
Brother sec ..AGTATCG.CGCATGCTAGATTACAAGCTATGTGGCTACCAC.CTTTCTGAGAGCCATTAGAACCTCACAACCT..CCTTTCAGCCTGCTTTTGTTTGCCTGTGAGGCTCTGTCAG.AG   113
Proband pri TTGAGGNGA..AGATGAGAGGTCACA.GCACTGTCGGCACCACACTTTCTGACAGCCATTAGAACCTCACAACCATACCTTTCAGCCTGCTTTTGTTTGCCTGTGAGGCTCTGTCAG.AG   116
Proband sec .TTCCAANG.YAGCTTCTCGCTCGCT.YCTGGGTCWGCAGCGCATRTCTGAGAGCCATTATGGGCGGAGATTCATACCTTTCAGCCTGCTTTTGTTTGCCTGTGAGGCTCTGTCAG.AG   116
RefSeq      ..........................................................................................................                  0
```

Block 2

```
logo
Father pri  GGCTGGGTCAGGGACTGGCCCTTGCCGGAGGCAGGGAGAGCTGACCTCTGTGAATTCTGGGCTTCGTACCTAGAATGTCCTGTGCCCTTTCTGAACCTTGCTTTGCCCTCAGTTCCTGGA   235
Father sec  GGCTGGGTCAGGGACTGGCCCTTGCCGGAGGCAGGGAGAGCTGACCTCTGTGAATTCTGGGCTTCGTACCTAGAATGTCCTGTGCCCTTTCTGAACCTTGCTTTGCCCTCAGTTCCTGGA   235
Mother pri  GGCTGGGTCAGGGACTGGCCCTTGCCGGAGGCAGGGAGAGCTGACCTCTGTGAATTCTGGGCTTCGTACCTAGAATGTCCTGTGCCCTTTCTGAACCTCGCTTTGCCCTCAGTTCCTGGA   228
Mother sec  GGCTGGGTCAGGGACTGGCCCTTGCCGGAGGCAGGGAGAGCTGACCTCTGTGAATTCTGGGCTTCGTACCTAGAATGTCCTGTGCCCTTTCTGAACCTTGCTTTGCCCTCAGTTCCTGGA   228
Sister pri  GGCTGGGTCAGGGACTGGCCCTTGCCGGAGGCAGGGAGAGCTGACCTCTGTGAATTCTGGGCTTCGTACCTAGAATGTCCTGTGCCCTTTCTGAACCTTGCTTTGCCCTCAGTTCCTGGA   233
Sister sec  GGCTGGGTCAGGGACTGGCCCTTGCCGGAGGCAGGGAGAGCTGACCTCTGTGAATTCTGGGCTTCGTACCTAGAATGTCCTGTGCCCTTTCTGAACCTTGCTTTGCCCTCAGTTCCTGGA   233
Brother pri GGCTGGGTCAGGGACTGGCCCTTGCCGGAGGCAGGGAGAGCTGACCTCTGTGAATTCTGGGCTTCGTACCTAGAATGTCCTGTGCCCTTTCTGAACCTTGCTTTGCCCTCAGTTCCTGGA   233
Brother sec GGCTGGGTCAGGGACTGGCCCTTGCCGGAGGCAGGGAGAGCTGACCTCTGTGAATTCTGGGCTTCGTACCTAGAATGTCCTGTGCCCTTTCTGAACCTTGCTTTGCCCTCAGTTCCTGGA   233
Proband pri GGCTGGGTCAGGGACTGGCCCTTGCCGGAGGCAGGGAGAGCTGACCTCTGTGAATTCTGGGCTTCGTACCTAGAATGTCCTGTGCCCTTTCTGAACCTTGCTTTGCCCTCAGTTCCTGGA   236
Proband sec GGCTGGGTCAGGGACTGGCCCATGCCGGAGGCAGGGAGAGCTGACCTCTGTGAATTCTGGGCTTCGTACCTAGAAAGTCCTGTGCCCTTTCTGAACCTTGCTTTGCCCTCAGTTCCTGGA   236
RefSeq      ...............................................................................................................TTCCTGGA     8
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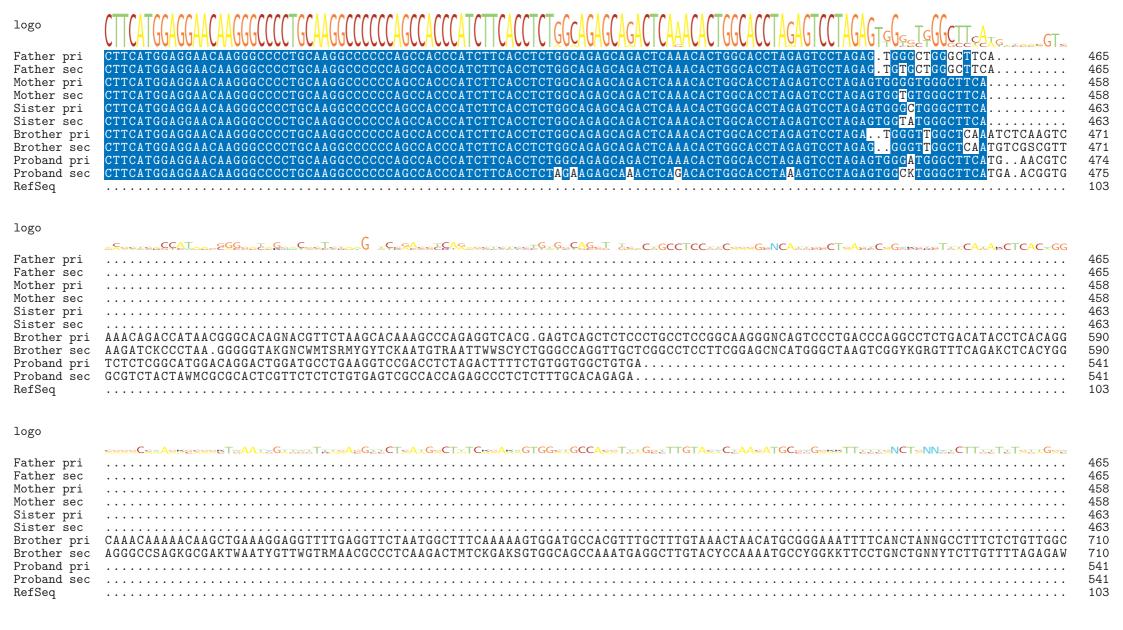
Block 3

```
logo
Father pri  AGCCTGGGTCCCGGACCACCAGCCCTGTCAGATCTGCACATGCCTCAGCGGGCGGAAGGTCAACTGCACAACGCAGCCCTGCCCCACGGCCAAAGGTGAGAGTCCTCCCCTCCCTGGTGC   355
Father sec  AGCCTGGGTCCCGGACCACCAGCCCTGTCAGATCTGCACATGCCTCAGCGGGCGGAAGGTCAACTGCACAACGCAGCCCTGCCCCACGGCCAAAGGTGAGAGTCCTCCCCTCCCTGGTGC   355
Mother pri  AGCCTGGGTCCCGGACCACCAGCCCTGTCAGATCTGCACATGCCTCAGCGGGCGGAAGGTCAACTGCACAACGCAGCCCTGCCCCACGGCCAAAGGTGAGAGTCCTCCCCTCCCTGGTGC   348
Mother sec  AGCCTGGGTCCCGGACCACCAGCCCTGTCAGATCTGCACATGCCTCAGCGGGCGGAAGGTCAACTGCACAACGCAGCCCTGCCCCACGGCCAAAGGTGAGAGTCCTCCCCTCCCTGGTGC   348
Sister pri  AGCCTGGGTCCCGGACCACCAGCCCTGTCAGATCTGCACATGCCTCAGCGGGCGGAAGGTCAACTGCACAACGCAGCCCTGCCCCACGGCCAAAGGTGAGAGTCCTCCCCTCCCTGGTGC   353
Sister sec  AGCCTGGGTCCCGGACCACCAGCCCTGTCAGATCTGCACATGCCTCAGCGGGCGGAAGGTCAACTGCACAACGCAGCCCTGCCCCACGGCCAAAGGTGAGAGTCCTCCCCTCCCTGGTGC   353
Brother pri AGCCTGGGTCCCGGACCACCAGCCCTGTCAGATCTGCACATGCCTCAGCGGGCGGAAGGTCAACTGCACAACGCAGCCCTGCCCCACGGCCAAAGGTGAGAGTCCTCCCCTCCCTGGTGC   353
Brother sec AGCCTGGGTCCCGGACCACCAGCCCTGTCAGATCTGCACATGCCTCAGCGGGCGGAAGGTCAACTGCACAACGCAGCCCTGCCCCACGGCCAAAGGTGAGAGTCCTCCCCTCCCTGGTGC   353
Proband pri AGCCTGGGTCCCGGACCACCAGCCCTGTCAGATCTGCACATGCCTCAGCGGGCGGAAGGTCAACTGCACAACGCAGCCCTGCCCCACGGCCAAAGGTGAGAGTCCTCCCCTCCCTGGTGC   356
Proband sec AGCCTGGGTCCCGGACCACCAGCCCTGTCAGATCTGCACATGACTCATCGGCGGAAGGTCAACTGCACAACGCAYCCCTGCCCCACGGCCAAAGGTGAGAGTCCTCCCCTCCCTGGTGC   356
RefSeq      AGCCTGGGTCCCGGACCACCAGCCCTGTCAGATCTGCACATGCCTCAGCGGGCGGAAGGTCAACTGCACAACGCAGCCCTGCCCCACGGCCAAAG.........................   103
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logo

Father pri	CTTCATGGAGGAACAAGGGCCCCTGCAAGGCCCCCCAGCCACCCATCTTCACCTCTGGCAGAGCAGACTCAAACACTGGCACCTAGAGTCCTAGAG.TGGGCTGGGCTTCA.........	465
Father sec	CTTCATGGAGGAACAAGGGCCCCTGCAAGGCCCCCCAGCCACCCATCTTCACCTCTGGCAGAGCAGACTCAAACACTGGCACCTAGAGTCCTAGAG.TGTGCTGGGCTTCA.........	465
Mother pri	CTTCATGGAGGAACAAGGGCCCCTGCAAGGCCCCCCAGCCACCCATCTTCACCTCTGGCAGAGCAGACTCAAACACTGGCACCTAGAGTCCTAGAGTGGGGTGGGCTTCA.........	458
Mother sec	CTTCATGGAGGAACAAGGGCCCCTGCAAGGCCCCCCAGCCACCCATCTTCACCTCTGGCAGAGCAGACTCAAACACTGGCACCTAGAGTCCTAGAGTGGTGTGGGCTTCA.........	458
Sister pri	CTTCATGGAGGAACAAGGGCCCCTGCAAGGCCCCCCAGCCACCCATCTTCACCTCTGGCAGAGCAGACTCAAACACTGGCACCTAGAGTCCTAGAGTGGGCTGGGCTTCA.....	463
Sister sec	CTTCATGGAGGAACAAGGGCCCCTGCAAGGCCCCCCAGCCACCCATCTTCACCTCTGGCAGAGCAGACTCAAACACTGGCACCTAGAGTCCTAGAGTGGTATGGGCTTCA.........	463
Brother pri	CTTCATGGAGGAACAAGGGCCCCTGCAAGGCCCCCCAGCCACCCATCTTCACCTCTGGCAGAGCAGACTCAAACACTGGCACCTAGAGTCCTAGA..TGGGTTGGCTCAAATCTCAAGTC	471
Brother sec	CTTCATGGAGGAACAAGGGCCCCTGCAAGGCCCCCCAGCCACCCATCTTCACCTCTGGCAGAGCAGACTCAAACACTGGCACCTAGAGTCCTAGAG..GGGTTGGCTCAATGTCGSCGTT	471
Proband pri	CTTCATGGAGGAACAAGGGCCCCTGCAAGGCCCCCCAGCCACCCATCTTCACCTCTGGCAGAGCAGACTCAAACACTGGCACCTAGAGTCCTAGAGTGGGATGGGCTTCATG..AACGTC	474
Proband sec	CTTCATGGAGGAACAAGGGCCCCTGCAAGGCCCCCCAGCCACCCATCTTCACCTCTAGAAGAGCAAACTCAGACACTGGCACCTAAAGTCCTAGAGTGGCKTGGGCTTCATGA.ACGGTG	475
RefSeq	....	103

logo

Father pri	......	465
Father sec	......	465
Mother pri	......	458
Mother sec	......	458
Sister pri	......	463
Sister sec	......	463
Brother pri	AAACAGACCATAACGGGCACAGNACGTTCTAAGCACAAAGCCCAGAGGTCACG.GAGTCAGCTCTCCCTGCCTCCGGCAAGGGNCAGTCCCTGACCCAGGCCTCTGACATACCTCACAGG	590
Brother sec	AAGATCKCCCTAA.GGGGGTAKGNCWMTSRMYGYTCKAATGTRAATTWWSCYCTGGGCCAGGTTGCTCGGCCTCCTTCGGAGCNCATGGGCTAAGTCGGYKGRGTTTCAGAKCTCACYGG	590
Proband pri	TCTCTCGGCATGGACAGGACTGGATGCCTGAAGGTCCGACCTCTAGACTTTTCTGTGGTGGCTGTGA..	541
Proband sec	GCGTCTACTAWMCGCGCACTCGTTCTCTCTGTGAGTCGCCACCAGAGCCCTCTCTTTGCACAGAGA...	541
RefSeq	......	103

logo

Father pri	......	465
Father sec	......	465
Mother pri	......	458
Mother sec	......	458
Sister pri	......	463
Sister sec	......	463
Brother pri	CAAACAAAAACAAGCTGAAAGGAGGTTTTGAGGTTCTAATGGCTTTCAAAAAGTGGATGCCACGTTTGCTTTGTAAACTAACATGCGGGAAATTTTCANCTANNGCCTTTCTCTGTTGGC	710
Brother sec	AGGGCCSAGKGCGAKTWAATYGTTWGTRMAACGCCCTCAAGACTMTCKGAKSGTGGCAGCCAAATGAGGCTTGTACYCCAAAATGCCYGGKKTTCCTGNCTGNNYCTTGTTTTAGAGAW	710
Proband pri	......	541
Proband sec	......	541
RefSeq	......	103

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logo
                  A≈T≈GA
Father pri      . . . . . .      465
Father sec      . . . . . .      465
Mother pri      . . . . . .      458
Mother sec      . . . . . .      458
Sister pri      . . . . . .      463
Sister sec      . . . . . .      463
Brother pri     AGTGGA           716
Brother sec     AATTGA           716
Proband pri     . . . . . .      541
Proband sec     . . . . . .      541
RefSeq          . . . . . .      103


            X    non conserved
            X    ≥ 50% conserved
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