Supplementary Material

Human reelin exon structure:

Text provided in this supplementary material provide a break down of the exonic structure of the reelin gene. The mRNA (NCBI accession XM_004972), that is approximately 11,565 bp in length, is transcribed from a primary transcript that spans greater than 410,000 bp. Based on an analysis of the mouse reelin gene (11), we systematically identified the corresponding splice donor and acceptor sequences in the human cDNA and compared this information present in various BAC and PAC clones that are currently available. Listed below are the sequences of each individual exon along with the size of the exon. With very few exceptions (exons 1, 31, 32, 57, 58 and 65), the human and mouse exons are identical in size. One exception is the first exon which is 392 bp in the human gene and 510 bp in the mouse. The overall size of the mouse transcript (NCBI accession NM_011261) is 108 nucleotides longer than the human and this difference appears to reside at the 5' end of the mRNA. A pairwise blast of these two sequences using the NCBI interface shows that there is 88% sequence identity between the reelin mRNA of these two species and that the degree of sequence identity extends all the way to the polyadenylation region. As indicated below, the size of the human with that of the corresponding mouse exon is compared (11). To verify the exon/intron boundaries, we've mapped the identified regions to genomic DNA available in the NCBI database. For example, the first exon maps from position 160,581 to 160,072 bp of the BAC clone RG126M09 (NCBI accession AC002067). The arrow present in exon 1 indicates the translational start codon and bolded sequence represents the reelin CGG repeats. The shorter exon 2, maps from 53,648 to 53,758 bp of clone GS283I11 (NCBI accession AC006981). Exon 3 extends from 39,522 to 39,627 bp of BAC clone RP11-418B19 (NCBI AC073208). Without giving specific coordinates, the following exons map to the indicated BAC and PAC clones (all of which map to c/some 7q21-22):

Exon 4: BAC clone CTA-352J5 (NCBI AC005101)
Exons 5 through 11: BAC clone RG249A12 (NCBI AC000121)
Exons 12 through 48: PAC clone DJ0672O11 (NCBI AC006316)
Exons 49 through 65: Human clone CTB-107G13 (NCBI AC005064)

Exon 1 → human 392 bp mouse 510 bp

5'CTCGGCGGGGGCCCGCTCCCAGGCCCGCTCCCGAGCCCGTTCCGCTCCGTCCGCCTTCT
TCTCGCCTTCTCTCCGCGTGGCTCCTCCGTCCCGGCGTCTCCAAAACTGAATGAGCGAGCG
+1
↓

GCGCGTAGGG**CGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG**CATGGAGCGCAGTG
GCTGGGCCCGGCAGACTTTCCTCCTAGCGCTGTTGCTGGGGGCGACGCTGAGGGCGCGC
GCGGCGGCTGGCTATTACCCCCGCTTTTCGCCCTTCTTTTTCCTGTGCACCCACCACGGGG
AGCTGGAAGGGGATGGGGAGCAGGGCGAGGTGCTCATTTCCCTGCATATTGCGGGCAACC
CCACCTACTACGTTCCGGGACAAGAATACCATG

Exon 2 → human 111 bp mouse 111 bp

TGACAATTTCAACAAGCACCTTTTTTTGACGGCTTGCTGGTGACAGGACTATACACATCTACAA
GTGTTCAGGCATCACAGAGCATTGGAGGTTCCAGTGCTTTCGGATTTG

Exon 3 → human 136 bp mouse 136 bp

GGATCATGTCTGACCACCAGTTTGGTAACCAGTTTATGTGCAGTGTGGTAGCCTCTCACGTG
AGTCACCTGCCCACAACCAACCTCAGTTTCATCTGGATTGCTCCACCTGCGGGCACAGGCT
GTGTGAATTTCAT

Exon 4 → human 71 bp mouse 71 bp

GGCTACAGCAACACACCGGGGCCAGGTTATTTTCAAAGATGCTTTAGCCCAGCAGTTGTGT
GAACAAGGAG

Exon 5 → human 33 bp mouse 33 bp
CTCCAACAGATGTCACTGTGCACCCACATCTAG

Exon 6 → human 79 bp mouse 79 bp

CTGAAATACATAGTGACAGCATTATCCTGAGAGATGACTTTGACTCCTACCACCAACTGCAAT
TAAATCCAAATATATG

Exon 7 → human 97 bp mouse 97 bp

GGTTGAATGTAACAACTGTGAGACTGGAGAACAGTGTGGCGCGATTATGCATGGCAATGCC
GTCACCTTCTGTGAACCATATGGCCCACGAGAACTG

Exon 8 → human 52 bp mouse 52 bp
ATTACCACAGGCCTTAATACAACAACAGCTTCTGTCCTCCAATTTTCCATTG

Exon 9 → human 97 bp mouse 97 bp

GGTCAGGTTCATGTCGCTTTAGTTATTCAGACCCCAGCATCATCGTGTTATATGCCAAGAATA
ACTCTGCGGACTGGATTCAGCTAGAGAAAATTAG

Exon 10 → human 241 bp mouse 241 bp

AGCCCCTTCCAATGTCAGCACAATCATCCATATCCTCTACCTTCCTGAGGACGCCAAAGGGG
AGAATGTCCAATTTCAGTGGAAGCAGGAAAATCTTCGTGTAGGTGAAGTGTATGAAGCCTGC
TGGGCCTTAGATAACATCTTGATCATCAATTCAGCTCACAGACAAGTCGTTTTAGAAGATAGT
CTCGACCCAGTGGACACAGGCAACTGGCTTTTCTTCCCAGGAGCTACAGTTAAG

Exon 11 → human 146 bp mouse 146 bp

CATAGCTGTCAGTCAGATGGGAACTCCATTTATTTCCATGGAAATGAAGGCAGCGAGTTCAA
TTTTGCCACCACCAGGGATGTAGATCTTTCCACAGAAGATATTCAAGAGCAATGGTCAGAAG
AATTTGAGAGCCAGCCTACAGG

Exon 12 → human 152 bp mouse 152 bp

ATGGGATGTCTTGGGAGCTGTCATTGGTACAGAATGTGGAACGATAGAATCAGGCTTATCAA
TGGTCTTCCTCAAAGATGGAGAGAGGAAATTATGCACTCCATCCATGGACACTACCGGTTAT
GGGAACCTGAGGTTTTACTTTGTGATGG

Exon 13 → human 113 bp mouse 113 bp

GAGGAATTTGTGACCCTGGAAATTCTCATGAAAATGACATAATCCTGTATGCAAAAATTGAAG
GAAGAAAAGAGCATATAACACTGGATACCCTTTCCTATTCCTCATATAAG

Exon 14 → human 209 bp mouse 209 bp

GTTCCGTCTTTGGTTTCTGTGGTCATCAATCCTGAACTTCAGACTCCTGCTACCAAATTTTGT
CTCAGGCAAAAGAACCATCAAGGACATAATAGGAATGTCTGGGCTGTAGACTTTTTCCATGT
CTTGCCTGTTCTCCCTTCTACAATGTCTCACATGATACAGTTTTCCATCAATCTGGGATGTGG
AACGCATCAGCCTGGTAACAG

Exon 15 → human 129 bp mouse 129 bp

TGTCAGCTTGGAATTTTCTACCAACCATGGGCGCTCCTGGTCCCTCCTTCACACTGAATGCT
TACCTGAGATCTGTGCTGGACCCCACCTCCCCCACAGCACTGTCTACTCCTCTGAAAACTAC
AGTGG

Exon 16 → human 110 bp mouse 110 bp

GTGGAACCGAATAACAATTCCCCTTCCTAACGCAGCACTAACCCGGAACACCAGGATTCGCT
GGAGACAAACAGGACCAATCCTTGGAAACATGTGGGCAATTGATAATG

Exon 17 → human 67 bp mouse 67 bp

TTTATATTGGCCCGTCATGTCTCAAATTCTGTTCTGGCAGAGGACAGTGCACTAGACATGGT
TGCAA

Exon 18 → human 234 bp mouse 234 bp

GTGTGACCCTGGATTTTCTGGCCCAGCTTGTGAGATGGCATCCCAGACATTCCCAATGTTTA
TTTCTGAAAGCTTTGGCAGTTCCAGGCTCTCCTCTTACCATAACTTTTACTCTATCCGTGGTG
CTGAAGTCAGCTTTGGTTGTGGTGTCTTGGCCAGTGGTAAGGCCCTGGTTTTCAACAAAGAA
GGGCGGCGTCAGCTAATTACATCTTTCCTTGACAGCTCACAATCCAG

Exon 19 → human 162 bp mouse 162 bp

GTTTCTCCAGTTCACACTGAGACTGGGGAGCAAATCTGTTCTGAGCACGTGCAGAGCCCCT
GATCAGCCTGGTGAAGGAGTTTTGCTGCATTATTCTTATGATAATGGGATAACTTGGAAACTC
CTGGAGCATTATTCATATCTCAGCTATCATGAGCCCAG

Exon 20 → human 237 bp mouse 237 bp

AATAATCTCCGTAGAACTACCAGGTGATGCAAAGCAGTTTGGAATTCAGTTCAGATGGTGGC
AACCGTATCATTCTTCCCAGAGAGAAGATGTATGGGCTATTGATGAGATTATCATGACATCTG
TGCTTTTCAACAGCATTAGTCTTGACTTTACCAATCTTGTGGAGGTCACTCAGTCTCTGGGAT
TCTACCTTGGAAATGTTCAGCCATACTGTGGCCACGACTGGACCCTTTG

Exon 21 → human 193 bp mouse 193 bp

TTTTACAGGAGATTCTAAACTTGCCTCAAGTATGCGCTATGTGGAAACACAATCAATGCAGAT
AGGAGCATCCTATATGATTCAGTTCAGTTTGGTGATGGGATGTGGCCAGAAATACACCCCAC
ACATGGACAACCAGGTGAAGCTGGAGTACTCAACCAACCACGGCCTTACCTGGCACCTCGT
CCAAGAA

Exon 22 → human 113 bp mouse 113 bp

GAATGCCTTCCAAGTATGCCAAGTTGTCAGGAATTTACATCAGCAAGTATTTACCATGCCAGT
GAGTTTACACAGTGGAGGAGAGTCATAGTGCTTCTTCCCCAGAAAACTTG

Exon 23 → human 138 bp mouse 138 bp

GTCCAGTGCTACCCGTTTCCGCTGGAGCCAGAGCTATTACACAGCTCAAGACGAGTGGGCT
TTGGACAGCATTTACATTGGGCAGCAGTGCCCCAACATGTGCAGTGGGCATGGCTCATGCG
ATCATGGCATATGCAG

Exon 24 → human 187 bp mouse 187 bp

GTGTGACCAGGGGTACCAAGGCACTGAATGCCACCCAGAAGCTGCCCTTCCGTCCACAATT
ATGTCAGATTTTGAGAACCAGAATGGCTGGGAGTCTGACTGGCAAGAAGTTATTGGGGGAG
AAATTGTAAAACCAGAACAAGGGTGTGGTGTCATCTCTTCTGGATCATCTCTGTACTTCAGCA
AG

Exon 25 → human 206 bp mouse 206 bp

GCTGGGAAAAGACAGCTGGTGAGTTGGGACCTGGATACTTCTTGGGTGGACTTTGTCCAGT
TCTACATCCAGATAGGCGGAGAGAGTGCTTCATGCAACAAGCCTGACAGCAGAGAGGAGGG
CGTCCTCCTTCAGTACAGCAACAATGGGGGCATCCAGTGGCACCTGCTAGCAGAGATGTAC
TTTTCAGACTTCAGCAAACCCAG

Exon 26 → human 172 bp mouse 172 bp

ATTTGTCTATCTGGAGCTTCCAGCTGCTGCCAAGACCCCTTGCACCAGGTTCCGCTGGTGG
CAGCCCGTGTTCTCAGGGGAGGACTATGACCAGTGGGCAGTCGATGACATCATCATTCTGT
CCGAGAAGCAGAAGCAGATCATCCCAGTTATCAATCCAACTTTACCTCAG

Exon 27 → human 201 bp mouse 201 bp

AACTTTTATGAGAAGCCAGCTTTTGATTACCCTATGAATCAGATGAGTGTGTGGTTGATGTTG
GCTAATGAAGGAATGGTTAAAAATGAAACCTTCTGTGCTGCCACACCATCAGCAATGATATTT
GGAAAATCAGATGGAGATCGATTTGCAGTAACTCGAGATTTGACCCTGAAACCTGGATATGT
GCTACAGTTCAAG

Exon 28 → human 233 bp mouse 233 bp

CTAAACATAGGTTGTGCCAATCAATTCAGCAGTACTGCTCCAGTTCTTCTTCAGTACTCTCAT
GATGCTGGTATGTCCTGGTTTCTGGTGAAAGAAGGCTGTTACCCGGCTTCTGCAGGCAAAG
GATGCGAAGGAAACTCCAGAGAACTAAGTGAGCCCACCATGTATCACACAGGGGACTTTGA
AGAATGGACAAGAATCACCATTGTTATTCCAAGGTCTCTTGCATCCAG

Exon 29 → human 158 bp mouse 158 bp

CAAGACCAGATTCCGATGGATCCAGGAGAGCAGCTCACAGAAAAACGTGCCTCCATTTGGT
TTAGATGGAGTGTACATATCCGAGCCTTGTCCCAGTTACTGCAGTGGCCATGGGGACTGCAT
TTCAGGAGTGTGTTTCTGTGACCTGGGATATACTG

Exon 30 → human 208 bp mouse 208 bp

CTGCACAAGGAACCTGTGTGTCAAATGTCCCCAATCACAATGAGATGTTCGATAGGTTTGAG
GGGAAGCTCAGCCCTCTGTGGTACAAGATAACAGGTGCCCAGGTTGGAACTGGCTGTGGAA
CACTTAACGATGGCAAATCTCTCTACTTCAATGGCCCTGGGAAAAGGGAAGCCCGGACGGT
CCCTCTGGACACCAGGAATATCAG

Exon 31 → human 78 bp mouse 77 bp

ACTTGTTCAATTTTATATACAAATTGGAAGCAAAACTTCAGGCATTACCTGCATCAAACCAAG
AACTAGAAATGAAGG

Exon 32 → human 158 bp mouse 159 bp

GCTTATTGTTCAGTATTCAAATGACAATGGGATACTCTGGCATTTGCTTCGAGAGTTGGACTT
CATGTCCTTCCTGGAACCACAGATCATTTCCATTGACCTGCCACAGGACGCGAAGACACCTG
CAACGGCATTTCGATGGTGGCAACCGCAACATG

Exon 33 → human 189 bp mouse 189 bp

GGAAGCATTCAGCCCAGTGGGCTTTGGATGATGTTCTTATAGGAATGAATGACAGCTCTCAA
ACTGGATTTCAAGACAAATTTGATGGCTCTATAGATTTGCAAGCCAACTGGTATCGAATCCAA
GGAGGTCAAGTTGATATTGACTGTCTCTCTATGGATACTGCTCTGATATTCACTGAAAACATA
G

Exon 34 → human 274 bp mouse 274 bp

GAAAACCTCGTTATGCTGAGACCTGGGATTTTCATGTGTCAGCATCTACCTTTTTGCAGTTTG
AAATGAGCATGGGCTGTAGCAAGCCCTTCAGCAACTCCCACAGTGTACAGCTCCAGTATTCT
CTGAACAATGGCAAGGACTGGCATCTTGTCACCGAAGAGTGTGTTCCTCCAACCATTGGCTG
TCTGCATTACACGGAAAGTTCAATTTACACCTCGGAAAGATTCCAGAATTGGAAGCGGATCA
CTGTCTACCTTCCACTCTCCACCAT

Exon 35 → human 141 bp mouse 141 bp

TTCTCCCAGGACCCGGTTCAGATGGATTCAGGCCAACTACACTGTGGGGGCTGATTCCTGG
GCGATTGATAATGTTGTACTGGCCTCAGGGTGCCCTTGGATGTGCTCAGGACGAGGGATTT
GTGATGCTGGACGCTGTGT

Exon 36 → human 178 bp mouse 178 bp

GTGTGACCGGGGCTTTGGTGGACCCTATTGTGTTCCTGTTGTTCCTCTGCCCTCGATTCTTA
AAGACGATTTCAATGGGAATTTACATCCTGACCTTTGGCCTGAAGTGTATGGTGCAGAGAGG
GGGAATCTGAATGGTGAAACCATCAAATCTGGAACATCTCTAATTTTTAAAGGG

Exon 37 → human 85 bp mouse 85 bp

GAAGGACTAAGGATGCTTATTTCAAGAGATCTAGATTGTACAAATACAATGTATGTCCAGTTT
TCACTTAGATTTATAGCAAAAA

Exon 38 → human 183 bp mouse 183 bp

GTACCCCAGAGAGATCTCACTCTATTCTGTTACAATTCTCCATCAGTGGAGGAATCACTTGG
CACCTGATGGATGAATTTTACTTTCCTCAAACAACGAATATACTTTTCATCAATGTTCCCTTGC
CATACACTGCCCAAACCAATGCTACAAGATTCAGACTCTGGCAACCTTATAATAACG

Exon 39 → human 172 bp mouse 172 bp

GTAAGAAAGAAGAAATCTGGATTGTTGATGACTTCATTATCGATGGAAATAATGTAAACAACC
CTGTGATGCTCTTGGATACATTTGATTTTGGGCCCAGAGAAGACAATTGGTTTTTCTATCCTG
GTGGTAACATCGGTCTTTATTGTCCATATTCTTCAAAGGGGGCACC

Exon 40 → human 103 bp mouse 103 bp

TGAAGAAGATTCAGCTATGGTGTTTGTTTCAAATGAAGTTGGTGAGCATTCCATTACCACCCG
TGACCTAAATGTGAATGAGAACACCATCATACAATTTGAG

Exon 41 → human 230 bp mouse 230 bp

ATCAACGTTGGCTGTTCGACTGATAGCTCATCCGCGGATCCAGTGAGACTGGAATTTTCAAG
GGACTTCGGGGCGACCTGGCACCTTCTGCTGCCCCTCTGCTACCACAGCAGCAGCCACGT
CAGCTCTTTATGCTCCACCGAGCACCACCCCAGCAGCACCTACTACGCAGGAACCATGCAG
GGCTGGAGGAGGGAGGTCGTGCACTTTGGGAAGCTGCACCTTTGTGG

Exon 42 → human 221 bp mouse 221 bp

ATCTGTCCGTTTCAGATGGTACCAGGGATTTTACCCTGCCGGCTCTCAGCCAGTGACATGG
GCCATTGATAATGTCTACATCGGTCCCCAGTGTGAGGAGATGTGTAATGGACAGGGGAGCT
GTATCAATGGAACCAAATGTATATGTGACCCTGGCTACTCAGGTCCAACCTGTAAAATAAGC
ACCAAAAATCCTGATTTTCTCAAAGATGATTTCGAAG

Exon 43 → human 148 bp mouse 148 bp

GTCAGCTAGAATCTGATAGATTCTTATTAATGAGTGGTGGGAAACCATCTCGAAAGTGTGGA
ATCCTTTCTAGTGGAAACAACCTCTTTTTCAATGAAGATGGCTTGCGCATGTTGATGACACGA
GACCTGGATTTATCACATGCTAG

Exon 44 → human 259 bp mouse 259 bp

ATTTGTGCAGTTCTTCATGAGACTGGGATGTGGTAAAGGCGTTCCTGACCCCAGGAGTCAAC
CCGTGCTCCTACAGTATTCTCTCAACGGTGGCCTCTCGTGGAGTCTTCTTCAGGAGTTCCTT
TTCAGCAATTCCAGCAATGTGGGCAGGTACATTGCCCTGGAGATACCCTTGAAAGCCCGTTC
TGGTTCTACTCGCCTTCGCTGGTGGCAACCGTCTGAGAATGGGCACTTCTACAGCCCCTGG
GTTATCGATCAG

Exon 45 → human 250 bp mouse 250 bp

ATTCTTATTGGAGGAAATATTTCTGGTAATACGGTCTTGGAAGATGATTTCACAACCCTTGAT
AGTAGGAAATGGCTGCTTCACCCAGGAGGCACCAAGATGCCCGTGTGTGGCTCTACTGGTG
ATGCCCTGGTCTTCATTGAAAAGGCCAGCACCCGTTACGTGGTCAGCACAGACGTTGCCGT
GAATGAGGATTCCTTCCTACAGATAGACTTCGCTGCCTCCTGCTCAGTCACAGACTCTTGTT
ATG

Exon 46 → human 169 bp mouse 169 bp

CGATTGAATTGGAATACTCAGTAGATCTTGGATTGTCATGGCACCCATTGGTAAGGGACTGT
CTGCCTACCAATGTGGAATGCAGTCGCTATCATCTGCAACGGATCCTGGTGTCAGACACTTT
CAACAAGTGGACTAGAATCACTCTGCCTCTCCCTCCTTATACCAG

Exon 47 → human 141 bp mouse 141 bp

GTCCCAAGCCACTCGTTTCCGTTGGCATCAACCAGCTCCTTTTGACAAGCAGCAGACATGG
GCAATAGATAATGTCTATATCGGGGATGGCTGCATAGACATGTGCAGTGGCCATGGGAGAT
GCATCCAGGGAAACTGCGT

Exon 48 → human 179 bp mouse 179 bp

CTGTGATGAACAGTGGGGTGGCCTGTACTGTGATGACCCCGAGACCTCTCTTCCAACCCAA
CTCAAAGACAACTTCAATCGAGCTCCATCCAGTCAGAACTGGCTGACTGTGAACGGAGGGA
AATTGAGTACAGTGTGTGGAGCCGTGGCGTCGGGAATGGCTCTCCATTTCAGTGGGG

Exon 49 → human 193 bp mouse 193 bp

GTTGTAGTCGATTATTAGTCACTGTGGATCTAAACCTCACTAATGCTGAGTTCATCCAATTTT
ACTTCATGTATGGGTGCCTGATTACACCAAACAACCGTAACCAAGGTGTTCTCTTGGAATATT
CTGTCAATGGAGGCATTACCTGGAACCTGCTCATGGAGATTTTCTATGACCAGTACAGTAAG
CCCGG

Exon 50 → human 257 bp mouse 257 bp

ATTTGTGAATATCCTTCTCCCTCCTGATGCTAAAGAGATTGCCACTCGCTTCCGCTGGTGGC
AGCCAAGACATGACGGCCTGGATCAGAACGACTGGGCCATTGACAATGTCCTCATCTCAGG
CTCTGCTGACCAAAGGACCGTTATGCTGGACACCTTCAGCAGCGCCCCAGTACCCCAGCAC
GAGCGCTCCCCTGCAGATGCCGGCCCTGTCGGGAGGATCGCCTTTGACATGTTTATGGAAG
ACAAAACTTCAG

Exon 51 → human 155 bp mouse 155 bp

TGAATGAGCACTGGCTATTCCATGATGATTGTACAGTAGAAAGATTCTGTGACTCCCCTGAT
GGTGTGATGCTCTGTGGCAGTCATGATGGACGGGAGGTGTATGCAGTGACCCATGACCTGA
CTCCCACTGAAGGCTGGATTATGCAATTCAAG

Exon 52 → human 215 bp mouse 215 bp

ATCTCAGTTGGATGTAAGGTGTCTGAAAAAATTGCCCAGAATCAAATTCATGTGCAGTATTCT
ACTGACTTCGGTGTGAGTTGGAATTATCTGGTCCCTCAGTGCTTGCCTGCTGACCCAAAATG
CTCTGGAAGTGTTTCTCAGCCATCTGTATTCTTTCCAACTAAAGGGTGGAAAAGGATCACCTA
CCCACTTCCTGAAAGCTTAGTGGGAAA

Exon 53 → human 178 bp mouse 178 bp

TCCGGTAAGGTTTAGGTTCTATCAGAAGTACTCAGACATGCAGTGGGCAATCGATAATTTCT
ACCTGGGCCCTGGATGCTTGGACAACTGCAGGGGCCATGGAGATTGCTTAAGGGAACAGTG
CATCTGTGATCCGGGATACTCAGGGCCAAACTGCTACTTGACCCACACTCTGAAG

Exon 54 → human 176 bp mouse 176 bp

ACTTTCCTGAAGGAACGCTTTGACAGTGAAGAAATCAAACCTGACTTATGGATGTCCTTAGAA
GGTGGAAGTACTTGCACTGAGTGTGGAATTCTTGCCGAGGACACTGCACTCTATTTTGGGG
GATCCACTGTGAGACAAGCGGTTACACAAGATTTGGATCTTCGAGGTGCAAA

Exon 55 → human 107 bp mouse 107 bp

GTTCCTGCAATACTGGGGGCGCATCGGTAGTGAGAACAACATGACCTCTTGCCATCGTCCC
ATCTGCCGGAAGGAAGGCGTGCTGTTGGACTACTCTACCGATGGAG

Exon 56 → human 243 bp mouse 243 bp

GAATTACCTGGACTTTGCTCCATGAGATGGATTACCAGAAATACATTTCTGTTAGACACGACT
ACATACTTCTTCCTGAAGATGCCCTCACCAACACAACTCGACTTCGCTGGTGGCAGCCTTTT
GTGATCAGCAATGGAATTGTGGTCTCTGGGGTGGAGCGTGCTCAGTGGGCACTGGACAACA
TTTTGATTGGTGGAGCAGAAATCAATCCCAGCCAATTGGTGGACACTTTTGATGATG

Exon 57 → human 177 bp mouse 176 bp

AAGGCACTTCCCATGAAGAAAACTGGAGTTTTTACCCTAATGCTGTAAGGACAGCAGGATTT
TGTGGCAATCCATCCTTTCACCTCTATTGGCCAAATAAAAAGAAGGACAAGACTCACAATGCT
CTCTCCTCCCGAGAACTCATTATACAGCCAGGATACATGATGCAGTTTAAAA

Exon 58 → human 74 bp mouse 75 bp

TTGTGGTGGGTTGTGAAGCCACTTCTTGTGGTGACCTTCATTCCGTAATGCTGGAATACACT
AAGGATGCAAGA

Exon 59 → human 161 bp mouse 161 bp

TCGGATTCCTGGCAGCTCGTACAGACCCAGTGCCTTCCTTCCTCTTCTAACAGCATTGGCTG
CTCCCCTTTCCAGTTCCATGAAGCCACCATCTACAACTCTGTCAACAGCTCAAGCTGGAAAA
GAATCACCATCCAGCTGCCTGACCATGTCTCCTCTAG

Exon 60 → human 158 bp mouse 158 bp

TGCAACACAGTTCCGCTGGATCCAGAAGGGAGAAGAAACTGAGAAGCAAAGCTGGGCAATT
GACCACGTGTACATTGGAGAGGCTTGCCCCAAGCTCTGCAGCGGGCACGGATACTGCACG
ACCGGTGCCATCTGCATCTGCGACGAGAGCTTCCAAG

Exon 61 → human 220 bp mouse 220 bp

GTGATGACTGCTCTGTTTTCAGTCACGACCTTCCCAGTTATATTAAAGATAATTTTGAGTCCG
CAAGAGTCACCGAGGCAAACTGGGAGACCATTCAAGGTGGAGTCATAGGAAGTGGCTGTGG
GCAGCTGGCCCCCTACGCCCATGGAGACTCACTGTACTTTAATGGCTGTCAGATCAGGCAA
GCAGCTACCAAGCCTCTGGATCTCACTCGAGCAAG

Exon 62 → human 198 bp mouse 198 bp

CAAAATCATGTTTGTTTTGCAAATTGGGAGCATGTCGCAGACGGACAGCTGCAACAGTGACC
TGAGTGGCCCCCACGCTGTGGACAAGGCGGTGCTGCTGCAATACAGCGTCAACAACGGGA
TCACCTGGCATGTCATCGCCCAGCACCAGCCAAAGGACTTCACACAAGCTCAGAGAGTGTC
TTACAATGTCCCCCT

Exon 63 → human 99 bp mouse 99 bp

GGAGGCACGGATGAAAGGAGTCTTACTGCGCTGGTGGCAACCACGCCACAATGGAACAGG
TCATGATCAATGGGCTTTGGACCATGTGGAGGTCGTCCT

Exon 64 → human 6 bp mouse 6 bp
AGTAAG

Exon 65 → human 1119 bp mouse 1104 bp

CACTCGCAAACAAAATTACATGATGAATTTTTCACGACAACATGGGCTCAGACATTTCTACAA
CAGAAGACGAAGGTCACTTAGGCGATACCCATGAAGAATCAAAAAGTTTATTTTTTTTCTTCC
AACATGTGATGTGTTGCTCTCCATTCTTTTAAATCTCGCACTACATCTGATATCAGGAAATATC
TGTGAAGGACTTGGTGATTACCTGAAAGCCCTTCTCAAGACCGAGTGTACACCACTTTCCCA
CACTGTGAACTAATGACAAGTGACTTATTTGCTCATAAGTAAATGTCTTCATGTTGATGTGTC
CGTGAAAGTTGTGATCTGTTGTAATATCAGTTACAGTGGCAGTATTGACAATAAGAAACAGTT
TAACAGAAAAATGAAATTTAAGCACAAAAAATTTAAGAGATTTTATGTTTAAAATGGCATTTAG
CACAGTATTTAACATTCTTGGTCACAAAGCTATTTAAGTGGACTGTATTTCAGCTATGTCTCAT
GTTTTATATGATTAAATTATCATTGTTTGTCCTTTATGTATTCTCTTCTACAATACAACACATTG
AAACTGTATTTACTTGTTATGTTGTAATATTTTGCTGCTGAATTTGGGGCTACTTATATTCTGC
AGAAAATTAATTGAAATACCTATTCAAGAAGATAGTTGTAAAGATATTGTATCTCCTTTAATAT
ACTCCTTAAAAATGTATGTTGGTTTAGCGTTGTTTTGTGGATAAGAAAAATGCTTGACCCTGA
AATATTTTCTACTTTAAATTGTGGATGAAGACCCTATCTCCCACAAATAAGTTCCCATTTCCTT
GTCTAAAGATCTTTTTTTAAGTGTTCTGTGGCTGATTTACTAACAGTAACTGCCATTTTTTGTC
TGTGATAACAGAGTGATTTGTAAAACAGTGGTTGTTTTTTCATTGTGTTTTCTTCGTGGATTGT
TTTTTCTGCGGGTCATATTCATACCTTCTGATGAAGTTGTACAACACCAGCAACATTATAATG
GCCCTGTAGCTCTGAATGCTATTTGTGTAACTGAAAGGTTGCACTCTAGGGTGAACCAAGCT
ATAAAAGCCCATGCTTAAATAAAAATTATGTCCAAAAGCC- 3’