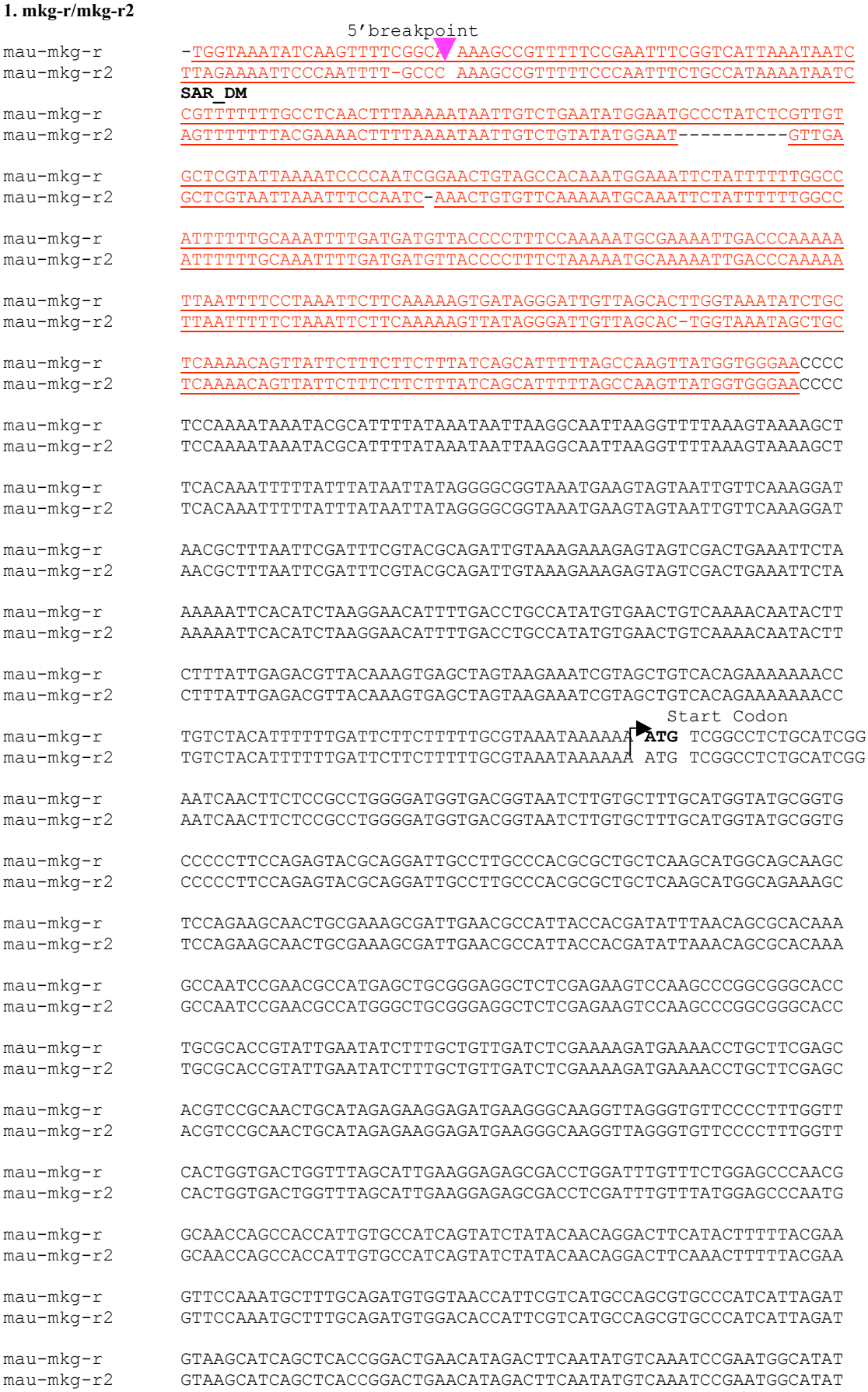
1. mkg-r/mkg-r2


5'breakpoint
mau-mkg-r -TGGTAAATATCAAGTTTTCGGCA AAAGCCGTTTTTCCGAATTTCGGTCATTAAATAATC
mau-mkg-r2 TTAGAAAATTCCCAATTTT-GCCC AAAGCCGTTTTTCCCAATTTCTGCCATAAAATAATC
SAR_DM
mau-mkg-r CGTTTTTTTGCCTCAACTTTAAAAATAATTGTCTGAATATGGAATGCCCTATCTCGTTGT
mau-mkg-r2 AGTTTTTTTACGAAAACTTTTAAAATAATTGTCTGTATATGGAAT----------GTTGA
mau-mkg-r GCTCGTATTAAAATCCCCAATCGGAACTGTAGCCACAAATGGAAATTCTATTTTTTGGCC
mau-mkg-r2 GCTCGTAATTAAATTTCCAATC-AAACTGTGTTCAAAAATGCAAATTCTATTTTTTGGCC
mau-mkg-r ATTTTTTGCAAATTTTGATGATGTTACCCCTTTCCAAAAATGCGAAAATTGACCCAAAAA
mau-mkg-r2 ATTTTTTGCAAATTTTGATGATGTTACCCCTTTCTAAAAATGCAAAAATTGACCCAAAAA
mau-mkg-r TTAATTTTCCTAAATTCTTCAAAAAGTGATAGGGATTGTTAGCACTTGGTAAATATCTGC
mau-mkg-r2 TTAATTTTTCTAAATTCTTCAAAAAGTTATAGGGATTGTTAGCAC-TGGTAAATAGCTGC
mau-mkg-r TCAAAACAGTTATTCTTTCTTCTTTATCAGCATTTTTAGCCAAGTTATGGTGGGAACCCC
mau-mkg-r2 TCAAAACAGTTATTCTTTCTTCTTTATCAGCATTTTTAGCCAAGTTATGGTGGGAACCCC
mau-mkg-r TCCAAAATAAATACGCATTTTATAAATAATTAAGGCAATTAAGGTTTTAAAGTAAAAGCT
mau-mkg-r2 TCCAAAATAAATACGCATTTTATAAATAATTAAGGCAATTAAGGTTTTAAAGTAAAAGCT
mau-mkg-r TCACAAATTTTTATTTATAATTATAGGGGCGGTAAATGAAGTAGTAATTGTTCAAAGGAT
mau-mkg-r2 TCACAAATTTTTATTTATAATTATAGGGGCGGTAAATGAAGTAGTAATTGTTCAAAGGAT
mau-mkg-r AACGCTTTAATTCGATTTCGTACGCAGATTGTAAAGAAAGAGTAGTCGACTGAAATTCTA
mau-mkg-r2 AACGCTTTAATTCGATTTCGTACGCAGATTGTAAAGAAAGAGTAGTCGACTGAAATTCTA
mau-mkg-r AAAAATTCACATCTAAGGAACATTTTGACCTGCCATATGTGAACTGTCAAAACAATACTT
mau-mkg-r2 AAAAATTCACATCTAAGGAACATTTTGACCTGCCATATGTGAACTGTCAAAACAATACTT
mau-mkg-r CTTTATTGAGACGTTACAAAGTGAGCTAGTAAGAAATCGTAGCTGTCACAGAAAAAAACC
mau-mkg-r2 CTTTATTGAGACGTTACAAAGTGAGCTAGTAAGAAATCGTAGCTGTCACAGAAAAAAACC
Start Codon
mau-mkg-r TGTCTACATTTTTTGATTCTTCTTTTTGCGTAAATAAAAAA ATG TCGGCCTCTGCATCGG
mau-mkg-r2 TGTCTACATTTTTTGATTCTTCTTTTTGCGTAAATAAAAAA ATG TCGGCCTCTGCATCGG
mau-mkg-r AATCAACTTCTCCGCCTGGGGATGGTGACGGTAATCTTGTGCTTTGCATGGTATGCGGTG
mau-mkg-r2 AATCAACTTCTCCGCCTGGGGATGGTGACGGTAATCTTGTGCTTTGCATGGTATGCGGTG
mau-mkg-r CCCCCTTCCAGAGTACGCAGGATTGCCTTGCCCACGCGCTGCTCAAGCATGGCAGCAAGC
mau-mkg-r2 CCCCCTTCCAGAGTACGCAGGATTGCCTTGCCCACGCGCTGCTCAAGCATGGCAGAAAGC
mau-mkg-r TCCAGAAGCAACTGCGAAAGCGATTGAACGCCATTACCACGATATTTAACAGCGCACAAA
mau-mkg-r2 TCCAGAAGCAACTGCGAAAGCGATTGAACGCCATTACCACGATATTAAACAGCGCACAAA
mau-mkg-r GCCAATCCGAACGCCATGAGCTGCGGGAGGCTCTCGAGAAGTCCAAGCCCGGCGGGCACC
mau-mkg-r2 GCCAATCCGAACGCCATGGGCTGCGGGAGGCTCTCGAGAAGTCCAAGCCCGGCGGGCACC
mau-mkg-r TGCGCACCGTATTGAATATCTTTGCTGTTGATCTCGAAAAGATGAAAACCTGCTTCGAGC
mau-mkg-r2 TGCGCACCGTATTGAATATCTTTGCTGTTGATCTCGAAAAGATGAAAACCTGCTTCGAGC
mau-mkg-r ACGTCCGCAACTGCATAGAGAAGGAGATGAAGGGCAAGGTTAGGGTGTTCCCCTTTGGTT
mau-mkg-r2 ACGTCCGCAACTGCATAGAGAAGGAGATGAAGGGCAAGGTTAGGGTGTTCCCCTTTGGTT
mau-mkg-r CACTGGTGACTGGTTTAGCATTGAAGGAGAGCGACCTGGATTTGTTTCTGGAGCCCAACG
mau-mkg-r2 CACTGGTGACTGGTTTAGCATTGAAGGAGAGCGACCTCGATTTGTTTATGGAGCCCAATG
mau-mkg-r GCAACCAGCCACCATTGTGCCATCAGTATCTATACAACAGGACTTCATACTTTTTACGAA
mau-mkg-r2 GCAACCAGCCACCATTGTGCCATCAGTATCTATACAACAGGACTTCAAACTTTTTACGAA
mau-mkg-r GTTCCAAATGCTTTGCAGATGTGGTAACCATTCGTCATGCCAGCGTGCCCATCATTAGAT
mau-mkg-r2 GTTCCAAATGCTTTGCAGATGTGGACACCATTCGTCATGCCAGCGTGCCCATCATTAGAT
mau-mkg-r GTAAGCATCAGCTCACCGGACTGAACATAGACTTCAATATGTCAAATCCGAATGGCATAT
mau-mkg-r2 GTAAGCATCAGCTCACCGGACTGAACATAGACTTCAATATGTCAAATCCGAATGGCATAT

```
mau-mkg-r       TTAACTCCCGATTTGTGGGCGAACTGATGCTTCGCAATGAGCGGATACGCGAGCTCAGCT
mau-mkg-r2      TTAACTCCCGATTTGTGGGCGAACTGATGCTTCGCAATGAGCGGATACGCGAGCTCAGCT

mau-mkg-r       TATTTTTGAAAATCTGGGCCAAGAAGCTAAAATTGATTTGCAATGGCGGCATGACAAGCT
mau-mkg-r2      TATTTTTGAAAATCTGGGCCAAGAAGCTAAAATTGATTTGCAATGGCGGCATGACAAGCT

mau-mkg-r       ATTGCTTAATATCCTTGATCATCGTAAACTTGCAAGTGAATCGAATAGTTCCATCCGTCA
mau-mkg-r2      ATTGCTTAATATCCTTGATCATCGTAAACTTGCAAGTGAATCGAATAGTTCCATCCGTCA

mau-mkg-r       AACAGCTCCAGTCACTCTGTCCACCGGTTATTTTGTCGGGCGTTAACTTTGCCTACAGCC
mau-mkg-r2      AACAGCTCCAGTCACTCTGTCCACCGGTTATTTTGTCGGGCGTTAACTTTGCCTACAGCC

mau-mkg-r       TGGACCTAACGCCGCCGATTACAGAACGGCTCACCACGCTGGATTTACTTAAAAACTTCT
mau-mkg-r2      TGGACCTAACGCCGCCGATTACAGAACGGCTCACCACGCTGGATTTACTTAAAAACTTCT

mau-mkg-r       TCATATACTACAGCACTGTCAACTTTGACAAAAGTTTATTGAGTCCGTTTCTGGGCGGCT
mau-mkg-r2      TCATATACTACAGCACTGTCAACTTTGACAAAAGTTTATTGAGTCCGTTTCTGGGCGGCT

mau-mkg-r       GTGTGGACAAGGAGACAACACTGGGCATACCAGGAGGATTTCCCGAGTACGATGAGCAAC
mau-mkg-r2      GTGTGGACAAGGAGACAACACTGGGCATACCAGGAGGATTTCCCGAGTACGATGAGCAAC

mau-mkg-r       AGAAGCTCGTGCATGATGCAACAGGTGAGCCGCCACACGCTTTCCAGCTGGATAGAGTTA
mau-mkg-r2      AGAAGCTCGTGCATGATGCAACAGGTGAGCCGCCACACGCTTTCCAGCTGGATAGAGTTA

mau-mkg-r       TGTGCGTACAGGATCCCTTCGAGCTGAACCGCAACGTGGCCAAATCAGTGTCCATTGCAA
mau-mkg-r2      TGTGCGTACAGGATCCCTTCGAGCTGAACCGCAACGTGGCCAAATCAGTGTCCATTGC-A

mau-mkg-r       ATTTATTTTACTTTAGACAATGCCTAGTCCTGGCTGCTCAAGCATGCAGCGATCAGGAAC
mau-mkg-r2      ATTTATTTTACTTTAGACAATGCCTAGTCCTGGCTGCTCAAGCATGCAGCGATCAGGAAC

mau-mkg-r       TAACTTCGCAACCAGAGAAGCTATACGACTACCTATTATTTGGCCTGGCGGATAAGTTAG
mau-mkg-r2      TAACTTCGCAACCAGAGAAGCTATACGACTACCTATTATTTGGCCTGGCGGATAAGTTAG

mau-mkg-r       TAGCCGACAAGATAGTGGCAGATAAAAGATGGCAGATTCAATGCCAAATTGAAAACAGAT
mau-mkg-r2      TAGCCGACAAGATAGTGGCAGATAAAAGATGGCAGATTCAATGCCAAATTGAAAACAGAT
          Stop Codon
mau-mkg-r       CT TAA TGACTTACACTTTTCACACATTCAATTACTTGAATTTACAATATCACTATAGACT
mau-mkg-r2      CT TAA TGACTTACACTTTTCACACATTCAATTACTTGAATTTACAATATCACTATAGACT

mau-mkg-r       AAACTAATACACTAAACTAATAAACTAAACTAATAAAGTTGACTAAACTTTTTCTTGGCA
mau-mkg-r2      AAACTAATACACTAAACTAATAAACTAAACTAATAAAGTTGACTAAACTTTTTCTTGGCA

mau-mkg-r       AAAGTCTCTTGGAGCAGGGAGAAATTATTTACAAGGGCAACAAAGCTTACTTAAATCATT
mau-mkg-r2      AAAGTCTCTTGGAGCAGGGAGAAATTATTTACAAGGGCAACAAAGCTTACTTAAATCATT

mau-mkg-r       TACAAGGGTGTGTCTGAATAATAAAGAAGTTATAATTGATGGCCAGTTATCCAGCGCGTC
mau-mkg-r2      TACAAGGGTGTGTCTGAATAATAAAGAAGTTATAATTGATGGCCAGTTATCCAGCGCGTC

mau-mkg-r       TGAAGAAGGTCTGATCGTGACAGCGCCACTGTGGTTCAAAGCACTCATTAAGATCCTGCG
mau-mkg-r2      TGAAGAAGGTCTGATCGTGACAGCGCCACTGTGGTTCAAAGCACTCATTAAGATCCTGCG

mau-mkg-r       TCTATTCGTGCGAAAGAAGCTGCGCGAGCGAGTGTTCCCTGTATCGGTGCCCCAATTGGC
mau-mkg-r2      TCTATTCGTGCGAAAGAAGCTGCGCGAGCGAGTGTTCCCTGTATCGGTGCCCCAATTGGC
                                                                3'breakpoint
mau-mkg-r       GCTGCACGTGCCGCGCAAGACGCTGCCCCTTCAGTTGGGTGGCACGCTGGAGGTCGATCG
mau-mkg-r2      GCTGCACGTGCCGCGCAAGACGCTGCCCCTTCAGTTGGGTGGCACGCTGGAGGTCGATCG
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2. CG3101/CG3101-r

```
sim-CG3101      ------------------------------------------------------------
sim-CG3101-r    AATGCAAATATGAAAATACCTTTCTGAGCTCGTAATTAAATTTCCAATCGAACTGTAATA

sim-CG3101      ------------------------------------------------------------
sim-CG3101-r    AGAAATAGGAATTCTATTTTTAATCAATTTTATACGTTTTGGCAAAGCGGTTTTTCTGAA
                SAR_DM                                      SAR_DM
sim-CG3101      ------------------------------------------AACATAATTGCCTGAATATG
sim-CG3101-r    TTTCGGGCATAAAATAATTAGTATTTTGGGCACAGCACAAAAAATATTTGTTCAAATAAT
                5'breakpoint
sim-CG3101      GAATGC CATACATCGTTGAGCTCGTAATTAAATTTCCAATCAAACTGTGTTCAAACATGG
sim-CG3101-r    GAAAGT CATAGCTCGTCGATATCGTTATTAAATTTCCAATCAAACTTTGTTCAAAAATGC

sim-CG3101      ATATTCAAATTTTTTGCCATTTT------------------------------------
sim-CG3101-r    AAATTCTAATTTTTCGCCATTTTTTTGCAAATTTTGATGATGTTACCCCTTACAAAAAATG
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sim-CG3101 ----------
sim-CG3101-r CTAAAATTGATTCAAAAATTAATTTTCCTAAATTCTTCAAAAAGTGATAGGGATCGTTAG
sim-CG3101 ----------TTTTTAGCCAA
sim-CG3101-r CACTGGTAATTAGCTGCTCAAAACAGTTATTCTTTCTTCTTTATGAGCATTTTTAGCCAA
sim-CG3101 GTTATGGTGGGAACCCTTCGAAAATAAATACGCATTTTATAAATAATTAAGGTAATTAAG
sim-CG3101-r GTTATGGTGGGAACCCCTCGAAAATAAATACGCATTTTATAAATAATTAAGGTAATTAAG
sim-CG3101 GTTTTAAAGTAAAAGCTTCACAAATTTTTATTTATAATTATAGGGGCGGTAAATGAAGTA
sim-CG3101-r GTTTTAAAGTAAAAGCTTCACAAATTTTTATTTATAATTATAGGGGCGGTAAATGAAGTA
sim-CG3101 GTAATTGTTCAAAGGATAACGCTTTAATTCGATTGCGTATGCAGATTGTAAAGTAGTCGA
sim-CG3101-r GTAATTGTTCAAAGGATAACGCTTTAATTCGATTTCGTATGCAGATTGTAAAGTAGTCGA
sim-CG3101 CTGAAATTCTAAAAAATTCAGATCTAAGGAACATTTTGACCTGCCATATGAGAACTGTCA
sim-CG3101-r CTGAAAATCTAAAAAATGCAGATCTAAGGAACATTTTGAC----------
sim-CG3101 AAACAATACTTCTTTATTGAGACGTTACAAAGTGAGCTAGTAAGAAATCGTAGCTGTCAC
sim-CG3101-r ----------CTTTATTGAGACGTTACAAAGTGAGCTA-TAAGAAATCGTAGCTGTCAC
Exon4
sim-CG3101 AGAAAAAAACCTGTCTAAATTTTTTGATTCTTGATG GCCGGTTATACAGCGCGTCTGAAG
sim-CG3101-r AAAAAAAAACCTGTCTAAATTTTTTGATTCTTGATG GCCGGTTATACAGCGCGTCTGAAG
sim-CG3101 AAGGTCCTGATCGTGACAGCGCCACTGTGGTTCAAAGCACTCATTAAGATCCTGCGTCTA
sim-CG3101-r AAGGTCCTGATCGTGACAGCGCCACTGTGGTTCAAAGCACTCATTAAGATCCTGCGTCTA
sim-CG3101 TTCGTGCGAAAGAAGCTGCGCGAGCGAGTGTTCACTGTATCGGTGCCTCAATTGGCGCTG
sim-CG3101-r TTCGTGCGAAAGAAGCTGCGCGAGCGAGTGTTCACTGTATCGGTGCCTCAATTGGCGCTG
sim-CG3101 CCCCTTCACTTGGGTGGCACGCTGGAGGTCGATCACGACACATCGTTGCTCAGCTGACGC
sim-CG3101-r CCCCTTCACTTGGGTGGCACGCTGGAGGTCGATCACGACACATCGTTGCTCAGCTGCCGC
sim-CG3101 CAATCGATGATGAATCGTGAGGACAAGCTGCTGGCCAATATCATGGATGTGAGCGATGGA
sim-CG3101-r CAATCGATGATGAATCGTGAGGACAAGCTGCTGGCCAATATCATGGATGTGAGCGATGGA
sim-CG3101 TCCGGATCCAGTTCAGAAACTGGATCAGAAATTGTGTCCAACAGTCAAAAAGCCAGGATA
sim-CG3101-r TCCGGATCCAGTTCAGAAACTGGATCAGAAATTGTGTCCAACAATAAAAAAACCAGGATA
sim-CG3101 ATCAGCGCCGTCCACCAGTTGGGCGATAATAATACCGCGGACAACAACAGAACCATCACG
sim-CG3101-r ATCAGCGCCGTCCACCAGTTGGGCGATAATAATACCGCGGACAACAACAGAACCATCACG
sim-CG3101 TACGCCACCACAGCCTCTGGAGCAGCTAACGGCGCCACCACCAATGGGGGCAGACAGTTT
sim-CG3101-r TACGCCACCACAGCCTCTGGAGCAGCTAACGGCGCCACCACCAATGGGGGCAGACAGTTT
sim-CG3101 TTGAACCCGCCCAGCAGCTCCTCATCCGACATGAGTATCGATGATAGTCTCGATGGTCAG
sim-CG3101-r TTGAACCCGCCCAGCAGCTCCTCATCCGACATGAGTATCGATGATAGTACTGATGGTCAG
sim-CG3101 GAGGGCGATTCCAAGTCCATTCATCAGATTGTCCAGATGATAAAGCAGGGCGGACTCCGT
sim-CG3101-r GAGGGCGATTCCAAGTCCATTCATCAGATTGTCCAGATGGTGAAGCAGGGCGGACTCCGT
sim-CG3101 GGTCTGTTTGAGGAGTACGCGGTCATTCGGAATAGGCCGCCCGAGGGCACCTTCTGGCAT
sim-CG3101-r GGTCTGTTTGAGGAGTACGCGGTCATTCGGAATAGGCCGCCCGAGGGCACCTTCTGGCAT
Exon4
sim-CG3101 TCAAG GTAGGTCAAATGAAATCTTCATTCTAGATCACTGATAATTAACGTTCCTATATTC
sim-CG3101-r TCGAG GTAGGTCAAATGAAATCTTCATTCTAGACCACTGATAATTAACGTTCCTATATTC
Exon5
sim-CG3101 TCGCAG AATGCATGCCAATCTGACCAAGAATCGCTTCGCAGACGTCCTCTGCTACGATCA
sim-CG3101-r TCGCAG AATGCATGCCAATCTGACCAAGAATCGCTTCGCAGACGTCCTCTGCTACGATCA
sim-CG3101 AAATCGAGTGGTTCTGACACACGAAGACGGCGACGAGGCGTCGGATTACATAAATGCGAA
sim-CG3101-r AAATCGAGTGGTTCTGACACACGAAGACGGCGACGAGGCGTCGGATTACATAAATGCGAA
Exon5
sim-CG3101 CTTCGTCGATGGCTACAAAGAAAATAGTGCCTATATAACAACTCAAG GTAAGCGATGATG
sim-CG3101-r CTTCGTCGATGGCTACAAAGAAAATAGTGCCTATATAACAACTCAAG GTAAGCGATGGTG
Exon6
sim-CG3101 ACACACTAAATCATATGCATAAACTATATGCTAATGGAGTTAACTCCGCCAG GTCCATTA
sim-CG3101-r ACACACTTAATCATATGCATAAACTATATGCTAATGGAGTTAACTCCGCCAG GTCCATTA
sim-CG3101 CCAAACACATGCAAGGACTTTTGGCGCATGATCTGGGAACAACATTGTTTACTTATAGTG
sim-CG3101-r CCAAACACATGCAAGGACTTTTGGCGCATGATCTGGGAACAACATTGTTTACTTATAGTG

```
sim-CG3101          ATGACGATGCGCGTGGTGGAGCGCGGATGTGTGAAATGCGTCCAGTACTGGGAGCCGACT
sim-CG3101-r        ATGACGATGCGCGTGGTGGAGCGCGGATGTGTGAAATGCGTCCAGTACTGGGAGCCGACT

sim-CG3101          GAAGAAGGTTCCTTAGAGTTTGGCGACTACCATGTGCGAACAATTAGCGTTGAGTGCAAC
sim-CG3101-r        GAAGAAGGTTCCTTAGAGTTTGGCGACTACCATGTGCGAACAATTAGCGTTGAGTGCAAC

sim-CG3101          GAGGGCTACATGGTTACCTCGTTAGAATTGAGAAACATAAAG------------------
sim-CG3101-r        GAGGGCTACATGGTTACCTCGTTAGAATTGAGAAACATANNNNNNNNNNNNNNNNNNNNN
                                                  Exon6
sim-CG3101          ------------------------- GTGAAGCTCTCTTTATAGTACAACGATAGCGAATA
sim-CG3101-r        NNNNNNNNNNNNNNNNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
                                                                    Exon7
sim-CG3101          TTATTAGAATCACTTTGTCATTTCGCCAACAG ACAGACGAAGTTCGCAATGTCTCACACT
sim-CG3101-r        NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNNNNN

sim-CG3101          GGCAGTTCACCAGCTGGCCGGACTATGGCATTCCCAGCTCGGCCATGACCATGCTGAACT
sim-CG3101-r        NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN

sim-CG3101          TCGTGCAGAAGGTGCGTGAGAAGCAGGCGCAGGTCCTCGAAGGACTGGTCGACACCTGGG
sim-CG3101-r        NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
                                                                                     Exon7
sim-CG3101          CGGGTCATCCCCTTGGACCGCCCATTGTGGTGCACTGCAGTGCAGGCATTGGACGCTCAG
sim-CG3101-r        NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN

sim-CG3101          GTGAGTCGCCAACATTGTAGACAATCCACGCCAGATTGACCGACTACCAAAAACTCTACA
sim-CG3101-r        NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
                          Exon8
sim-CG3101          CAG GTACATTCATCACCCTGGCCACTTGCATATCGCGCCTGGAGGACGTGGGCACGGTGG
sim-CG3101-r        NNN NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN

sim-CG3101          ACATACGTGGAACCGTTGAAAAGATCCGCTCGCAGCGAGCCCACTGTTTTCAGATGCCCG
sim-CG3101-r        NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN

sim-CG3101          AACAGTACGTGTTCTGCCACCTGGCCCTCATCGAATACGCATATTCGCGTGGAATGCTAA
sim-CG3101-r        NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
                                                                        Stop Codon
sim-CG3101          AGCCGGCCGATCTGGCTGGCTTCTATCAGCATGAACCGGACTTGGAG TAG GCTAATACTA
sim-CG3101-r        NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN NNNNNNNNTA

sim-CG3101          CCAACACAGTCCTTGGACCGGAAAACGGACGAGGAACCAACTTGAATACAGAATAATTTT
sim-CG3101-r        CCAACACAGTCTTTGGCCGGGAAACGGGAGAGGGAACCAACTTGTTTACAGAATAATTTT

sim-CG3101          ATGCTTTACCATTGCAAATTGGATTTGCAACTTTCTTCGACTA-GATGTTGGTCTTGATG
sim-CG3101-r        ATGTTTTACCATTGCAAATTGGAGTGGCAACTTTCTTCGACTAGGATGTTGGTCTGGATG

sim-CG3101          TGATA-TAATATGATATATATGATACGAGAGAAACGATGGGGAGCACAAATAGATCCAGA
sim-CG3101-r        TGATATTAATATGATATATATGATACGAGAGAAACGATGGGGAGCACAAATGGATCCAGA

sim-CG3101          GACACGGAGAGCGAGATGAAGTTGTGGGGAGTAGAGTAACCAATTTACGTTAATCTTTTA
sim-CG3101-r        GACACGGAGAGGGAGATGAAGTTGTGGGGAGTAGAGTAACCAATTTACGTTAATCTTTTA

sim-CG3101          TTTTTTTAAATATTAATACATACCAAGCAAAAATTGGTA-----------TACATAAATT
sim-CG3101-r        TTTTTTAAAATATTAATACATACCAAGCAAAAATTTCTATGTTAAAACGTTACATTAATT

sim-CG3101          AAATTTAAAGTATGTGAAAAACAAATAGCAAAAAATTTAGAAACAAAACCAGCAACATTA
sim-CG3101-r        AAATTTAAAGTAAGTGAAAAACAAATAGCAAAAAATTAAGAAACAAAACCAGCAACATTA
                                                         Polyadenylation Site
sim-CG3101          GCAAAACAAACAGC----AAAGAGTTCTTAACTGAAGAATAATTTCTTGGATTT CTGGTA
sim-CG3101-r        GCAAAACAAACAGCAAAGAAAGAGTTTTTAACCGAAGAATAATTTCTTGGATTT CTGGTA

sim-CG3101          CCAGGCGATCATAATCATTAGCATGTCGGGCATAACTTAAAAAATAATCGCCTGAATATG
sim-CG3101-r        CCAGGCGATCATAATCATTAGCATGTCGGGCATAACTTAAAAAATAATCGCCTGAATATG
                                                    SAR_DM
sim-CG3101          GAATGTTATGCCTCGTTGAGCTCGTAATTAAATTTCCAATCAAACTGTTTTCAAATATGA
sim-CG3101-r        GAATGTTATGCCTCGTTGAGCTCGTAATTAAATTTCCAATCCAACTGTGTTCCAAAAGGT

sim-CG3101          AAATTCTATTTTTTGTCAATTTTTTGCAAATTTTGATGATGTTACCCCTTTCCAAAAATG
sim-CG3101-r        TAATTCTATCTTTTGGCCATTATTTGCAAATTTTGATGA---------------------

sim-CG3101          CGAAAATTGACCCAAAAATTGATTTTCCTAAATTCTTCAAAAAGTGATAGGGATCGTTAG
sim-CG3101-r        -AAAAATTCACCCAAAAATTAATTTTCCTAAATTCTTCAAAAAGTGATAGGGATCGTTAG
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sim-CG3101        CATTGGTAATTAGCTGCTCAAAACAGTTATTCTTACATCTATATGACAATTTTCAGCCAA
sim-CG3101-r      CATTGGTAATTAGCTGCTCAAAACAGTTATTCTTTCATCTTTATGACAATTTTCAGCGAA

sim-CG3101        GATATGACGAAAATTCCGTTTGTAATTAACACGTTTTTGGCAAAAGCGGTTTTTCCGAAT
sim-CG3101-r      GGTATGACCATAATTCCATTTGTAAATATCAAGTTTTTGGCAAAAGCTGTTTTTCCGAAT

sim-CG3101        TTCGGTAGTCAAATAATCAGTTTTTCCGACACAACTTGAAATTTAATTGTCCAAATCTGG
sim-CG3101-r      TTCGGTAGTCAACTAATCAGATTTTTCGACACAACTTTAAAAATAATTGTCCAAATATGA

sim-CG3101        AATGCTATACCTCGCTGAACTTGTAATTAAATTTCCAATCAAACTGTGTTCAAAAATGCA
sim-CG3101-r      AATGCCATATCTCGTTGTGTTCGTAATTAAATTTCCAATCGAACTGTATCCACAAATGGA

sim-CG3101        AATTCTATTTTTTCCCCATTTTTTGCAAATTTTGATGATGTTACCCCTTACAAAAAATGC
sim-CG3101-r      AATTCTATTTTTTTGGCAATTTTTTGCAAATTTTGATGATGTTACCCCTTACAAAAAATGC

sim-CG3101        AAAAATTCACCCAAAAATTAATTTTCCTAAATTCTTCAAAAAGTGATAGGGATTGTTAGC
sim-CG3101-r      AAAAATTCACCCAAAAATTAATTTTCCTAAATTCTTCAAAAAGTGATAGGGATCGTTAGC
                                                                3'breakpoint
sim-CG3101        ACTGGTAATTAGCTGCTCAAAACAGTTATTCTTTCTTCATTATGAGCATTT TAGCCAGG
sim-CG3101-r      ATTGGTAATTAGCTGCTCAAAACAGTTATTCTTTCATCTTTATGAGCATTTT --------

sim-CG3101        TTATGACTAAAATTCCATTCGAAAAGTTTTGGATTTTTCGAAAATCTGGATCCAAAATCC
sim-CG3101-r      ------------------------------------------------------------

sim-CG3101        GTAAATCTGGATTGCAAACCTGTCCAAATCTGGATTGCATTCCTCGTTGAGCTTGTTATT
sim-CG3101-r      ------------------------------------------------------------

sim-CG3101        AAA
sim-CG3101-r      ---
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3. kep1/CG3875

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mel-kep1          ------------------------------------------------------------
mel-CG3875        GGAAGCGTTTCCGACCATATTAAGTATATTCTTGATATATTATATTATGAATATTCTTAA
                  DNAREP1_DM
mel-kep1          ------------------------------------------------------------
mel-CG3875        TTAGATATATTCTTGATCAGAATCAATATCAACTGTCTGTCCTTCTGTAGGAACGTCGAG

mel-kep1          ------------------------------------------------------------
mel-CG3875        ATCCCAGAAACTATAAAAGCTACAATGTTGAGATAAGGGTCACAGCTTCCCGAGACATAG

mel-kep1          ------------------------------------------------------------
mel-CG3875        TCGCAGCCTTTGTTGAACCATGTACCACGCCCACTCTAACGCCCACAAACATAATGGGCA
                5'breakpoint
mel-kep1          --CGACATTTAAACAATCACTATTGAATTAAAAAAGTTGGCAGCCCGAAAACTTCACACG
mel-CG3875        AC CGACATTTAAACAATCACTATAGCACTGAAAAAGCTGACAACCT-CAAACTTCATACG
                          Transcription Start Position
mel-kep1          CTTGGC AGCTCTGCCATTATTTTAGTTCATTGGTGTACATACTGTTTTTCAGTCTACACC
mel-CG3875        TTTGGC AGCTCGGCCAGCATTTCAGTTCATTGATATACAGAACATTGTTCAGTCTACATC
                                                    Start Codon
mel-kep1          -ATTTTTAATTGT-AATTTTCTGTAAAGATTGTT ATG ATAAAAATGGAAACCCCAAGCGA
mel-CG3875        AATTTTGAATTGTGAATATTCGGTAAAGATTATT GTG ATAAAAATGGAAACCCAAAGCGA

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mel-CG3875        GTTTACTGAGGAACAGAACCAAGACCAACCCACCCAGGACCAACCTACCTACCAGCCGCG

mel-kep1          TCTTAACGAGGTGGCCCAAAAGTTTCTCGCCGATTTGGACGAGGAGCGCCAGCGATTGTC
mel-CG3875        TCTGAACGAGGTGGCCCAAAAGTTTCTCGCCGATTTGGACGAGGAGCGCAAGCGATTGTC
                                              Exon1
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mel-CG3875        CGCGGAGTTTCCACTTTGCGCTCTGCTAATCGACGAAT GTAAAATCAATTTGGCTC-TTT
                                                    Exon2
mel-kep1          ACAGGGTATTTTAATGGTACTAATCCCAATATTGCAG CTGTGGACCGTGTCTACTGCACT
mel-CG3875        ACAGGGTATTTTAATGGTACTTATCCCAATATTGCAG CTGTGGACCGTGTCTTCTCCACT

mel-kep1          GGTCGTATTCCCGGAAAAGAGTTCTACGCAGACGTGTACAAGCAGAAGCCGATGAAGATT
mel-CG3875        GGTCGTATTCCCGGCAAAGAGTTCTACGCAGACGTGTACCACCAGAGGCCGATGAAGATT
                                            Exon2
mel-kep1          ACCCAAAAGGTCTTCGTGCCCGTAAAGCAGTATCCCAAG GTGGG-TTTATACAATTAGCT
mel-CG3875        ACCCAAAAGGTCTTCGTGCCCGTTAATAAGTTTCCCAAC GTGGGTTTTACACAATTAGTT
                                                      Exon3
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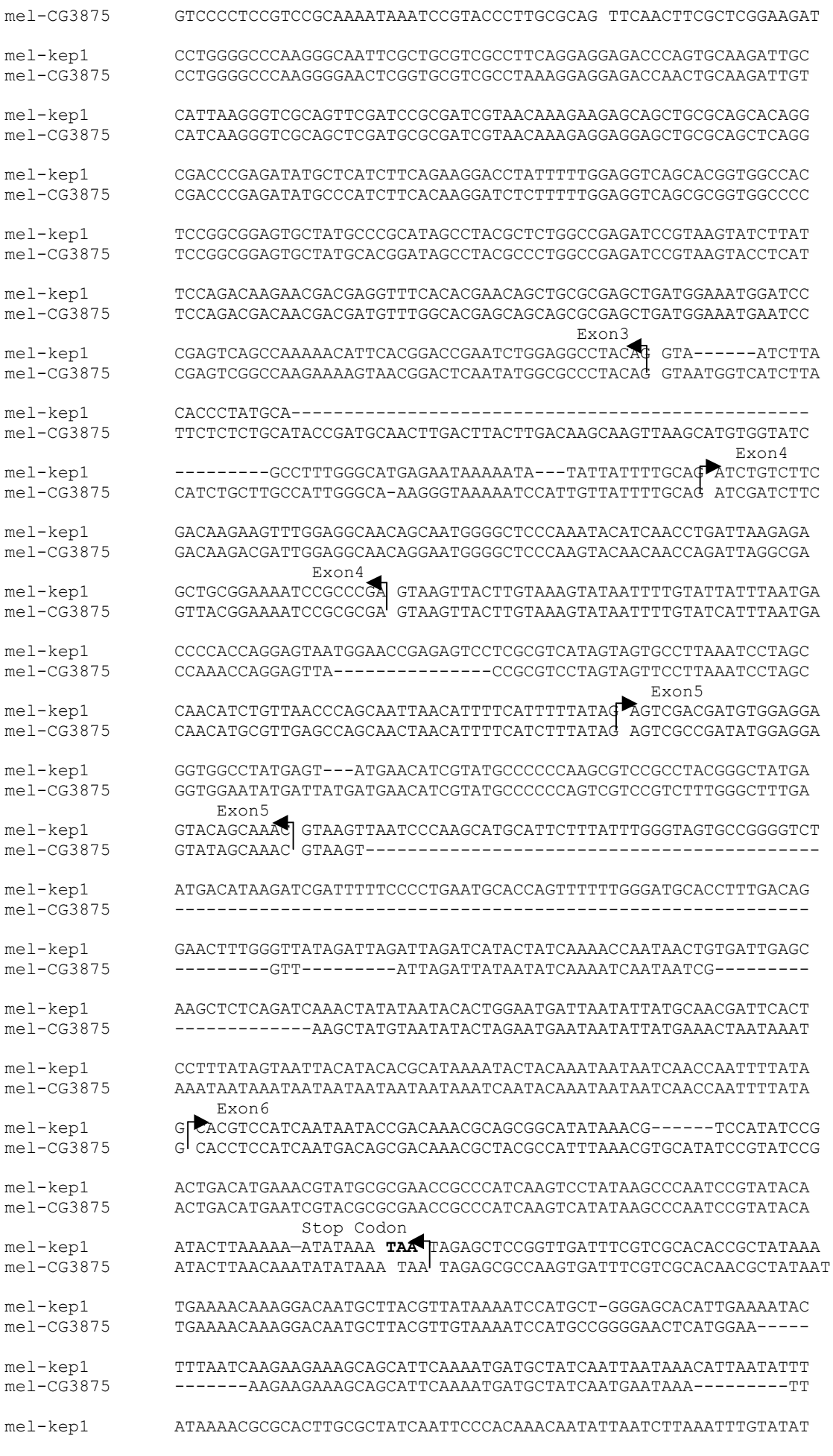
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Exon3
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mel-CG3875 TTCTCTCTGCATACCGATGCAACTTGACTTACTTGACAAGCAAGTTAAGCATGTGGTATC
Exon4
mel-kep1 ---------GCCTTTGGGCATGAGAATAAAAATA---TATTATTTTGCAG ATCTGTCTTC
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mel-CG3875 GGTGGAATATGATTATGATGAACATCGTATGCCCCCCAGTCGTCCGTCTTTGGGCTTTGA
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mel-CG3875 -------------AAGCTATGTAATATACTAGAATGAATAATATTATGAAACTAATAAAT
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mel-CG3875 AAATAATAAATAATAATAATAATAATAAATCAATACAAATAATAATCAACCAATTTTATA
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mel-kep1 ACTGACATGAAACGTATGCGCGAACCGCCCATCAAGTCCTATAAGCCCAATCCGTATACA
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Stop Codon
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mel-CG3875      ---------------------------------CCTGGATTCGTAATTTTCTATGAATGTA
                                                  Polyadenylation Site
mel-kep1        ------TAATAAAATGATACGCATTGAATGAATTTAATAAATTCTCTGCAATCAGA TCTA
mel-CG3875      AAAAACTAATAAAATAAAATGCATTGCATGAATTTGAAAAATTCTTTGAAATTAGA TCTA
              3'breakpoint
mel-kep1        ACTAT
mel-CG3875      ACTAT
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4. CG3875/CG3927

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                DNAREP1_DM
sim-CG3875      TATTAAGTATATTATAATATTAAAAATGTTCTTAAGTAAGTATAATTTTGATAGAATGTT
sim-CG3927      ----------------------------CACTCTAAAGCC--CACAAATATAATGGAAAACC
                      5'breakpoint
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sim-CG3927      TCCGCGGAGTTTCCACTTTGCGCACTGCTAATCGACGAGG GTAAAATCAATTGCGCCCTT
                                                  Exon2
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sim-CG3927      TACAGGGTATTTTAATGGTACTAATCCCACATTGCAG CTGTGGACCGTGTCTACAGCACT

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sim-CG3927      GGTCATATTCCCGGCAAGGAGCGCTTCGCCGACGTGTACCAGCAGAAGCCGATGAAGATT
                                          Exon2
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                                                    Exon3
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sim-CG3875      CATTAAGGGTCGCAGTTCGATCCGCGATCGTAACAAAGAGGAGCAGCTGCGCAGCTCCGG
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sim-CG3875      ----------------------------------------------------------
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sim-CG3875      ------------------------------------------------------------
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                          Exon3
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sim-CG3927      TCAATCAGCCGGCCTACAG GTAATGGGGATCTTATACTCTCTGCATACCGATGCAGCTTC
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                                                                  Exon4
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                                                        Exon5
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5. kep1/CG4021

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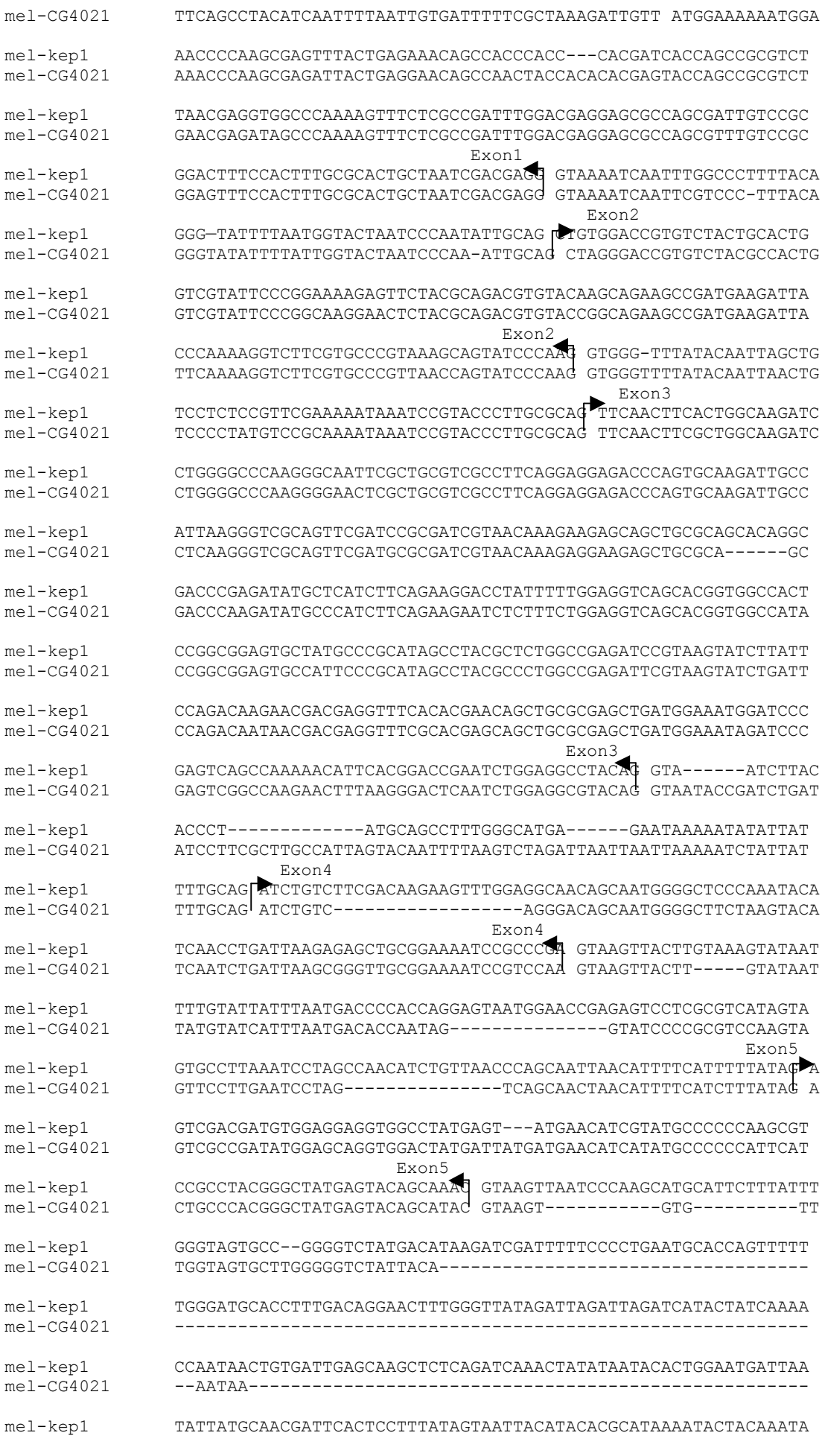
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Exon1
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Exon2
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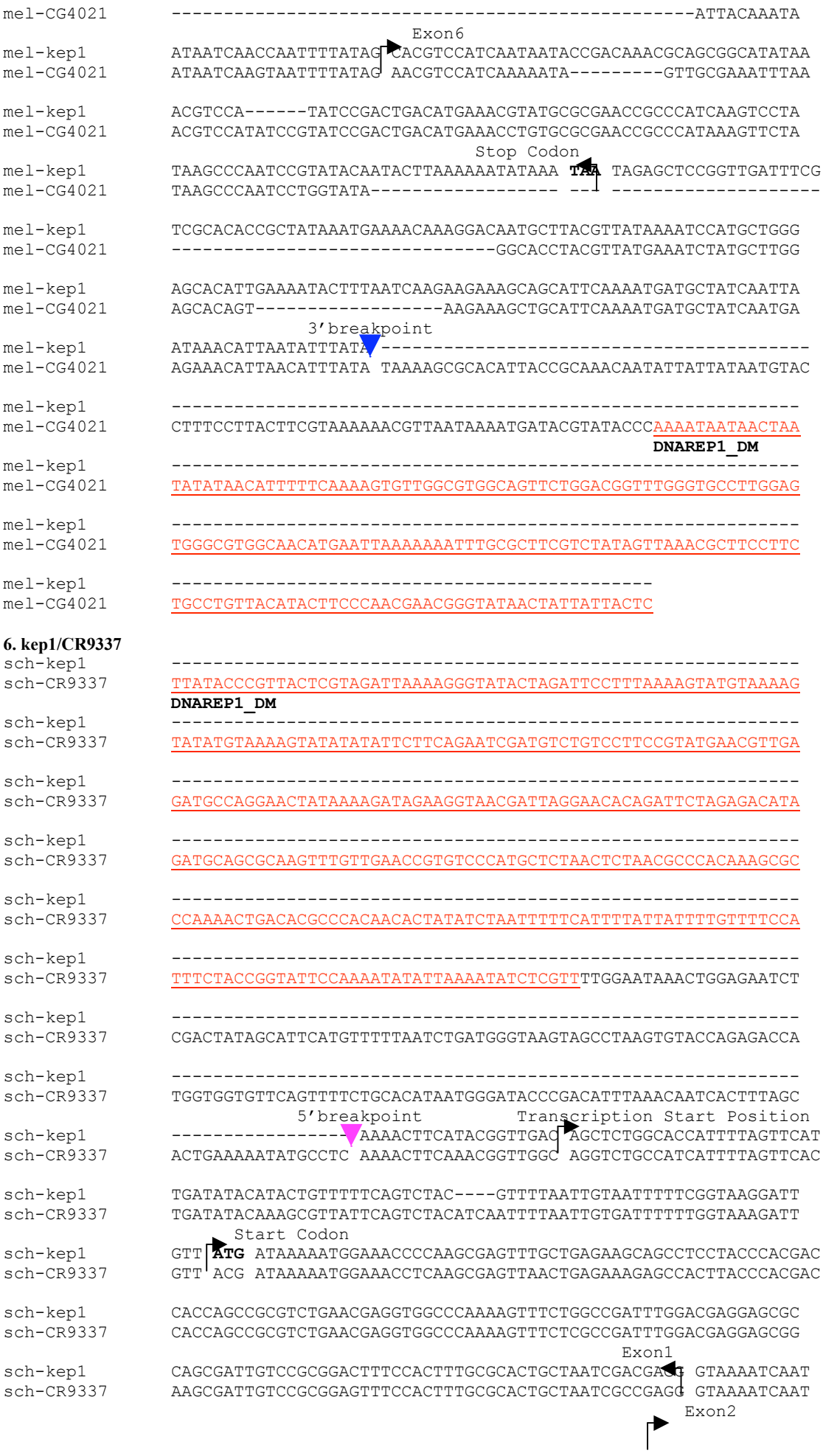
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sch-CR9337 TGGTGGTGTTCAGTTTTCTGCACATAATGGGATACCCGACATTTAAACAATCACTTTAGC
5'breakpoint
Transcription Start Position
sch-kep1 ----------AAAACTTCATACGGTTGAC AGCTCTGGCACCATTTTAGTTCAT
sch-CR9337 ACTGAAAAATATGCCTC AAAACTTCAAACGGTTGGC AGGTCTGCCATCATTTTAGTTCAC
sch-kep1 TGATATACATACTGTTTTTCAGTCTAC----GTTTTAATTGTAATTTTTCGGTAAGGATT
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Start Codon
sch-kep1 GTT ATG ATAAAAATGGAAACCCCAAGCGAGTTTGCTGAGAAGCAGCCTCCTACCCACGAC
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Exon1
sch-kep1 CAGCGATTGTCCGCGGACTTTCCACTTTGCGCACTGCTAATCGACGAAG GTAAAATCAAT
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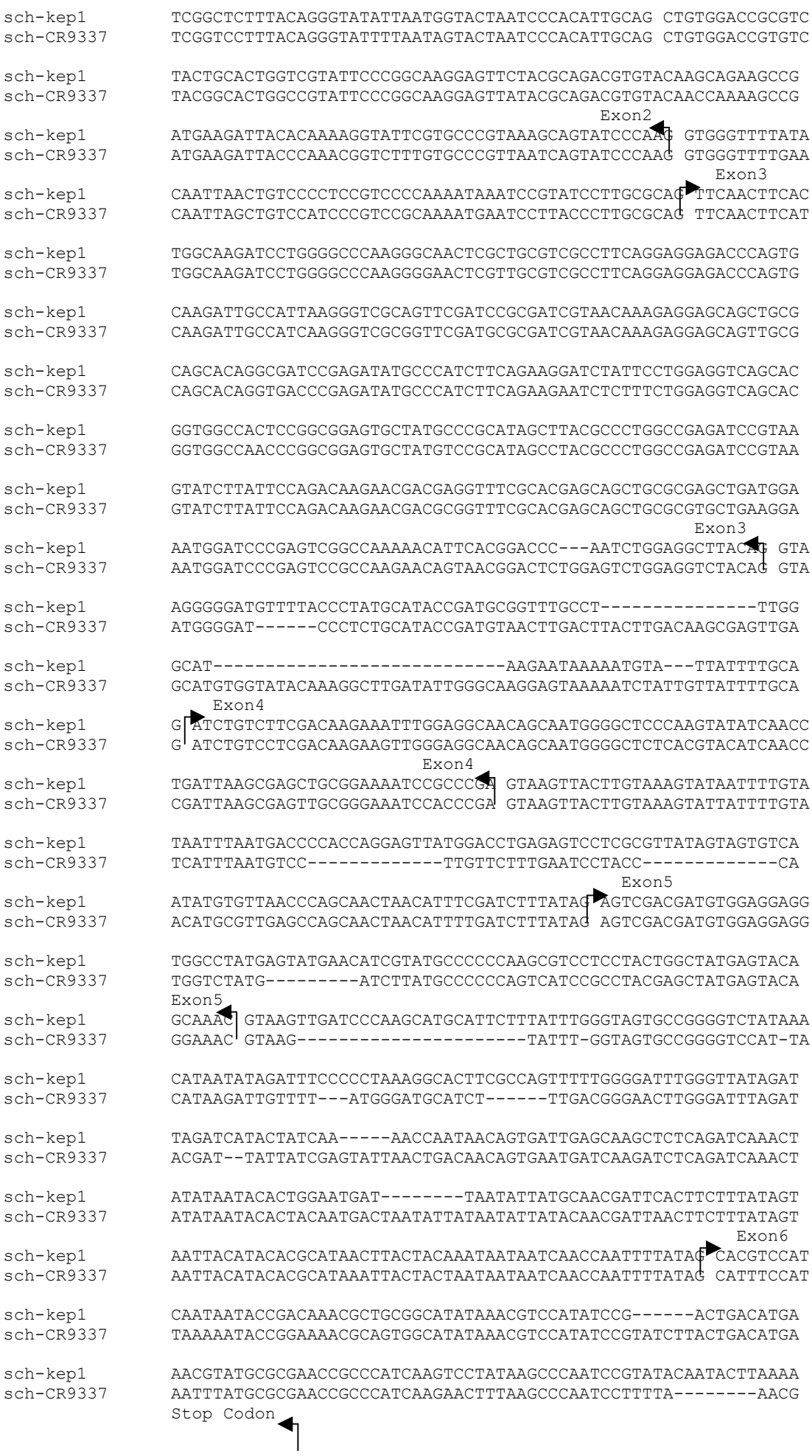
Exon2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sch-kep1 TACTGCACTGGTCGTATTCCCGGCAAGGAGTTCTACGCAGACGTGTACAAGCAGAAGCCG
sch-CR9337 TACGGCACTGGCCGTATTCCCGGCAAGGAGTTATACGCAGACGTGTACAACCAAAAGCCG
Exon2
sch-kep1 ATGAAGATTACACAAAAGGTATTCGTGCCCGTAAAGCAGTATCCCAAG GTGGGTTTTATA
sch-CR9337 ATGAAGATTACCCAAACGGTCTTTGTGCCCGTTAATCAGTATCCCAAG GTGGGTTTTGAA
Exon3
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sch-CR9337 CAATTAGCTGTCCATCCCGTCCGCAAAATGAATCCTTACCCTTGCGCAG TTCAACTTCAT
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Exon3
sch-kep1 AATGGATCCCGAGTCGGCCAAAAACATTCACGGACCC---AATCTGGAGGCTTACAG GTA
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sch-kep1 AACGTATGCGCGAACCGCCCATCAAGTCCTATAAGCCCAATCCGTATACAATACTTAAAA
sch-CR9337 AATTTATGCGCGAACCGCCCATCAAGAACTTTAAGCCCAATCCTTTTA--------AACG
Stop Codon

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sch-CR9337      GACTTAAG TTA ------------------------------------------------

sch-kep1        ACAATGCTTAAAATCCATGCTGGGAGCACATTGAAAATACTTTAATCAAGAAGAAAGCAG
sch-CR9337      --------TAAAATCCATGATGGGAGCACATTGAAAATACTTTAAACAAGATGGAAGCAG

sch-kep1        CATTCAAAATGATGCTATCAATGAATAAACATTAACATTTATAAAACGCGCACTTGCGCT
sch-CR9337      ATTTCAA------------AATGAATAAATATTAACATTTATAAAAACCGCACTTGCGCT

sch-kep1        ATCAATTTCCACAAACAATATTAACCTTAAATTTTTATTCCCATAAATATGTTAAACTGT
sch-CR9337      ATCAAATCCTACAAACAATATTAATCTTAATTATTTATTTCCCTAATTATGTTGAGCTGT

sch-kep1        TGGCATGCCTTTTCTGGACCATTTCAACAGATAATAAGTCAAATAATTCCTATTATGTTT
sch-CR9337      TGGCATG-----------------------------------------CCCATTATGTTT

sch-kep1        AAATTATGATTTCCTGAGTTCGTAATTTC---TTATGAATTAAAAAAATGTAATAAAAGG
sch-CR9337      AAATTAAAA--TCCTGCGTTTGTAATTTTCTATTATAAATTAAAACAC--TAATAAAATA
                              Polyadenylation Site
sch-kep1        ATACGCATTGAATGAATTTAATAAATTCTCAGCAATCATA TCTAACTATGCCCGATTCTT
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sch-CR9337      --ACATCCTTTTATC-----AGATGAATCAAAGTGAAGATCGCATCAAGATACTTAAGTG

sch-kep1        CGTCTAAAAATAAGTTAATAAACAATTATAAATTTATAAATGAACAAAAAAAGAACATTG
sch-CR9337      CTTTTAAAAATAATTTCATAATCCATCATAATTTTATAAATGAAC-AAGAGAGAACAATA
                                                        3'breakpoint
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7. CR9337/CR33318

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mel-CR33318     ------------------------------------------------------------

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mel-CR33318     --------------------AACTTTTTGCCACGCCC--ACTCTAACGCCC-TAAAGTCG
                                    DNAREP1_DM
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5'breakpoint
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Start Codon
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Exon1
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Exon2
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Exon3
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Exon4
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Exon4
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3'breakpoint
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DNAREP1_DM
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mel-CR33318      ------------------------------------------------------------

sch-CR9337       TTGCTT
mel-CR33318      ------
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8. CR9337/CR9337-r

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                 5'breakpoint
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                 DNAREP1_DM
sch-CR9337       ----------------------TATATGTAAAAGTATATATATTCTTCAGAATCGATGTCT
sch-CR9337-r     ACAGAAGAGAGCGTTCCCGACCATAT---AAAGTATATATATTCTTCAGAATCGATGTCT

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sch-CR9337       AACACAGATTCTAGAGACATAGATGCAGCGCAAGTTTGTTGAACCGTGTCCCATGCTCTA
sch-CR9337-r     AACACAGATTCTAGAGACATAGATGCAGCGCAAGTTTGTTGAACCGTGTCCCATGCTCTA

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sch-CR9337-r     ATTTTATTATTTTGTTTTCCATTTCTACCGGTATTCCAAAATATATTAAAATATCTCGTT

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sch-CR9337-r     TTGGAATAAACTGGAGAATCTCGACTATAGCATTCATGTTTTTAATCTGATGGGTAAGTA

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sch-CR9337-r     GCCTAAGTGTACCAGAGACCATGGTGGTGTTCAGTTTTCTGCACATAATGGGATACCCGA

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sch-CR9337-r     CATTTAAACAATCACTTTAGCACTGAAAAATATGCCTCAAAACTTCAATCGGTTGGCAGG

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                                                    Start Codon
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sch-CR9337-r     TGTGATTTTTTGGTAAAGATTGTTACGATAAAA| ATG GAAACCTCAAGCGAGTTAACTGAG

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sch-CR9337-r     AAAGAGCCACTTACCCACGACCACCAGCCGCGTCTGAACGAGGTGGCCCAAAAGTTTCTC

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sch-CR9337-r     GCCGATTTGGACGAGGAGCGGAAGCGATTGTCCGCGGAGTTTCCACTTTGCGCACTGCTA
                    Exon1
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sch-CR9337-r     ATCGCCGAGG|GTAAAATCAATTCGGCCCTTTACAGGGTATTTTAATAGTACTAATCCCAC

                           Exon2
sch-CR9337       ATTGCAG|CTGTGGACCGTGTCTACGGCACTGGCCGTATTCCCGGCAAGGAGTTATACGCA
sch-CR9337-r     ATTGCAG|CTGTGGACCGTGTCTACAGCACTGGTCGTATTCCCGGCAAGGAGTTATACGCA

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sch-CR9337-r     GACGTGTACAACCAAAAGCCGATGAAGATTACCCAAACGGTCTTTGTGCCCGTTAATCAG
                   Exon2
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sch-CR9337-r     TATCCCAAG|GTGGGTTTTGAACAATTAGCTGTCCATCCCGTCCGCAAAATGAATCCTTAC
                              Exon3
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sch-CR9337-r     CCTTGCGCAG|TTCAACTTCATTGGCAAGATCCTGGGGCCCAAGGGGAACTCGTTGCGTCG

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sch-CR9337-r     CCTTCAGGAGGAGACCCAGTGCAAGATTGCCATCAAGGGTCGCGGTTCGATGCGCGATCG

sch-CR9337       TAACAAAGAGGAGCAGTTGCGCAGCACAGGTGACCCGAGATATGCCCATCTTCAGAAGAA
sch-CR9337-r     TAACAAAGAGGAGCAGTTGCGCAGCACAGGTGACCCGAGATATGCCCATCTTCAGAAGAA

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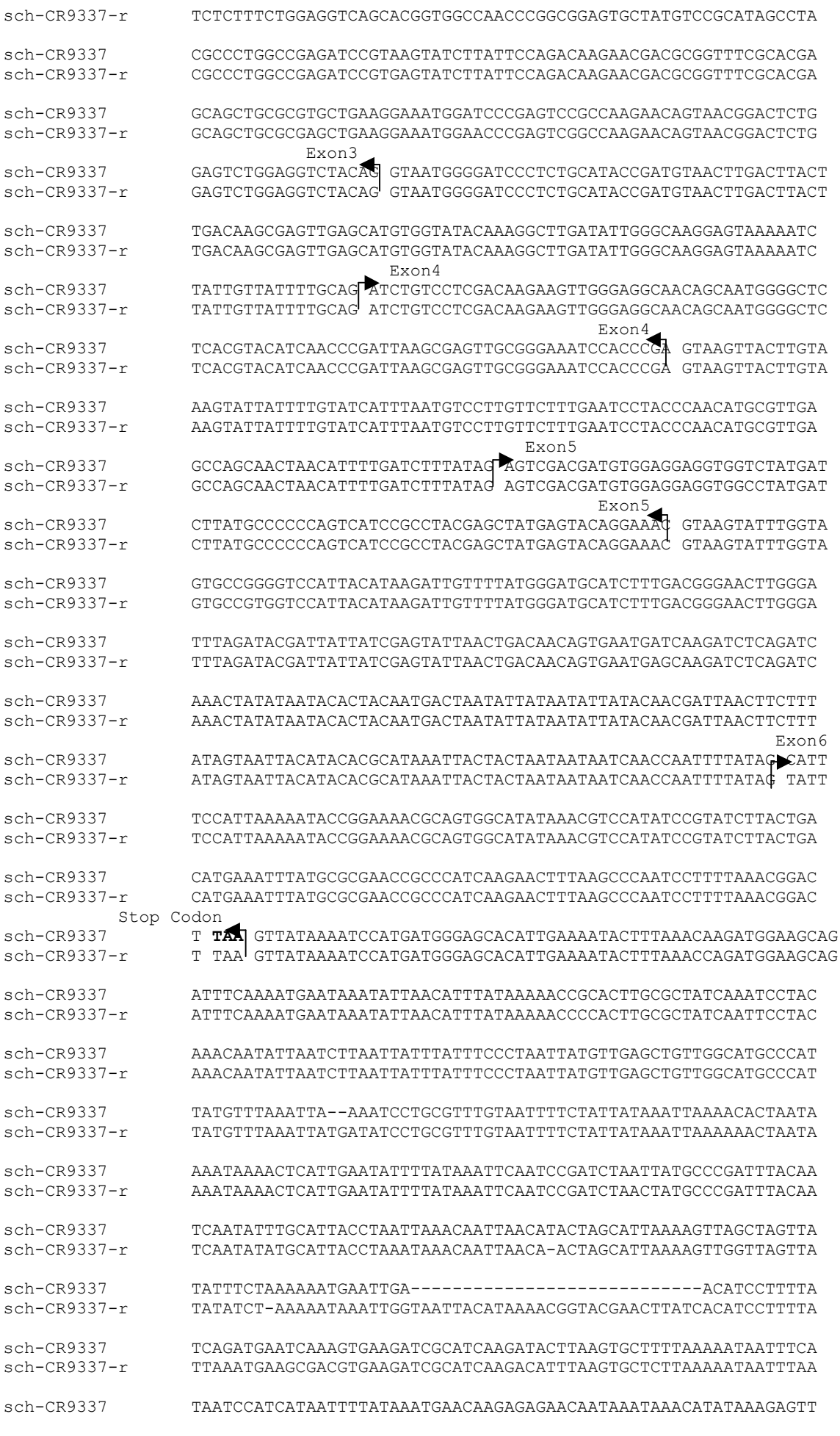
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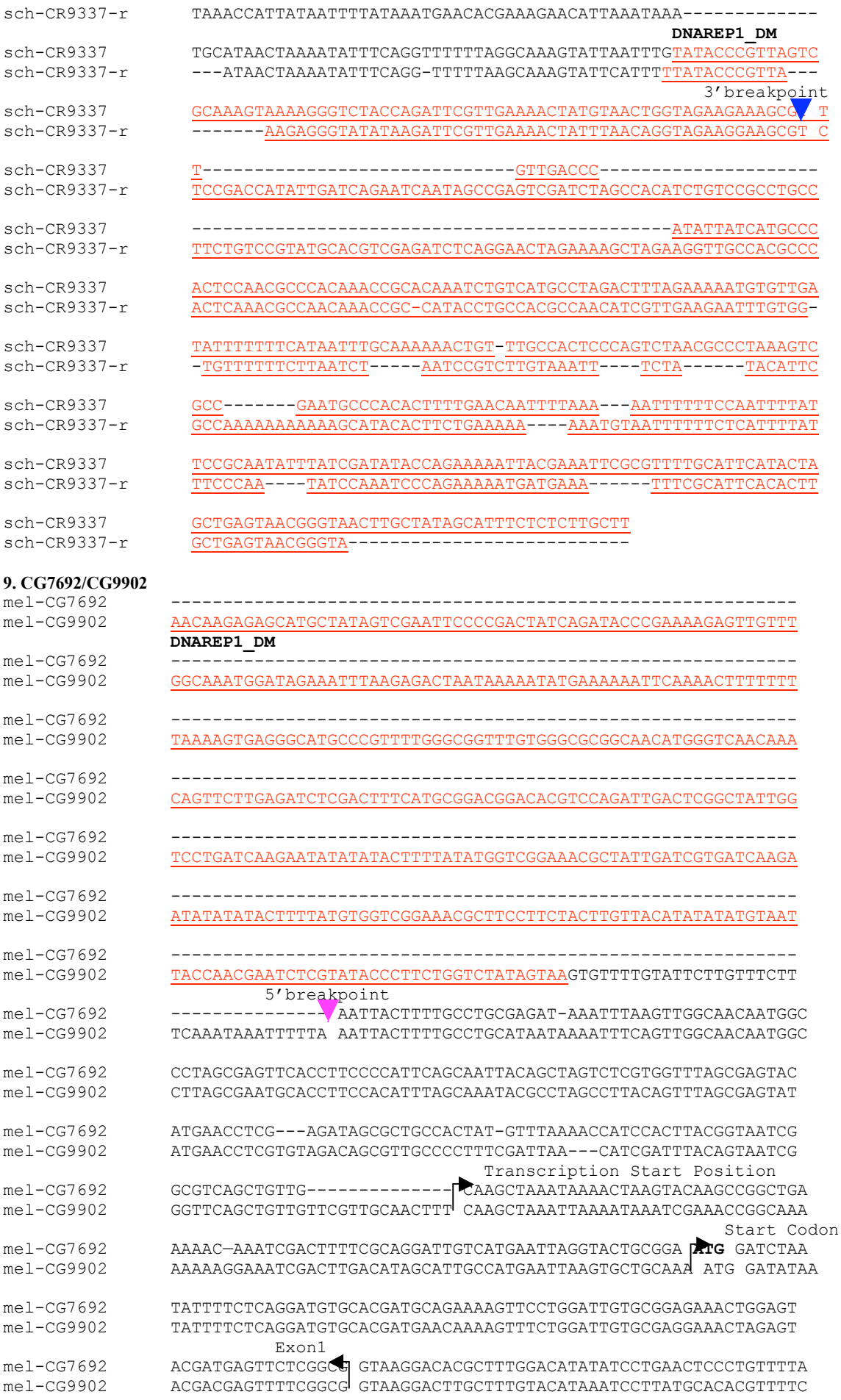
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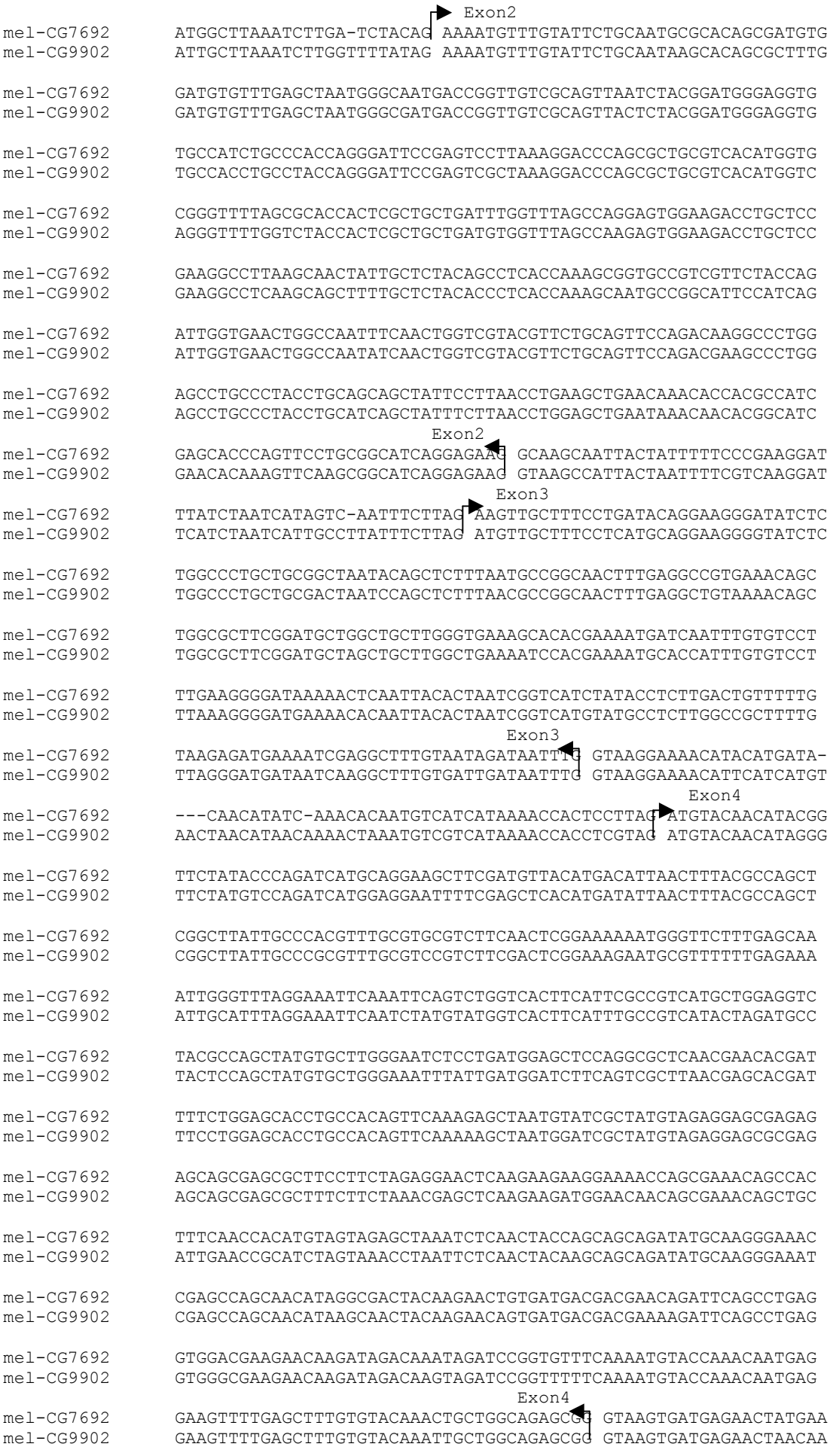
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yak-CG2952        AGGACCTGGGTCTGCCCACCTTCGCGGAGATCTTCCCAGATCACTTCATCGACTCGCAGA
yak-CG2952-r      AGGGCCTAGATCTGCCATCCTTTGCGCAAAGCTTTCCAGATCGATTCATCGACTCGCAGG

yak-CG2952        TGATTCGCAATATGCGCGAGGAGTCCTTTGTGGTGGAGCAGACCGCTGCCCGCCTGCCCG
yak-CG2952-r      TACTGCGCTCGGTACGCGAGCAATCGTTCGTGGTGGAGGAATCGGAATCACGGGTTCCTA

yak-CG2952        TCGTTAATTCGGTCAAGTATACCGCCTCTGACTTCGACGTGGAGCACCGGCTGTGGTACT
yak-CG2952-r      TTGTTGTTCCAGTTAACTATACCGCCTCCGATTTGGATCACGAGCACCGTCTGTGGTACT

yak-CG2952        TCCGCGAGGACTTGGGCGTCAACCTGCACCACTGGCACTGGCATCTGGTCTATCCCAT--
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yak-CG2952-r      ATGTCGACCGCCCGGCCAACCAGATCAAAGTGGGGCTCAACGACATGAAGCGGTGGATCG
                                                  Exon1
yak-CG2952        AGCGCATCTACGAGGCCATCCACCAGGGCTACGTTTTTGAT GTGAGT-GCAGCTCTAGCT
yak-CG2952-r      ATCGCATCTACCAAGCCATCCACCAGGGCTACGTTTTGGAT GTGAGTCTTGGCCATTGTC
                                                            Exon2
yak-CG2952        CTCTGAATGCCGGAATATAT----ACATATAGTTGGT-TCGTTGT—AG GATAACAATGA
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                            Exon2
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                                                        Exon3
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yak-CG2952        GGTGGAGATGGACAAGTTCGTTGTTACCATGCCACCCGGAAGCCAAACTATTACCCGGAA
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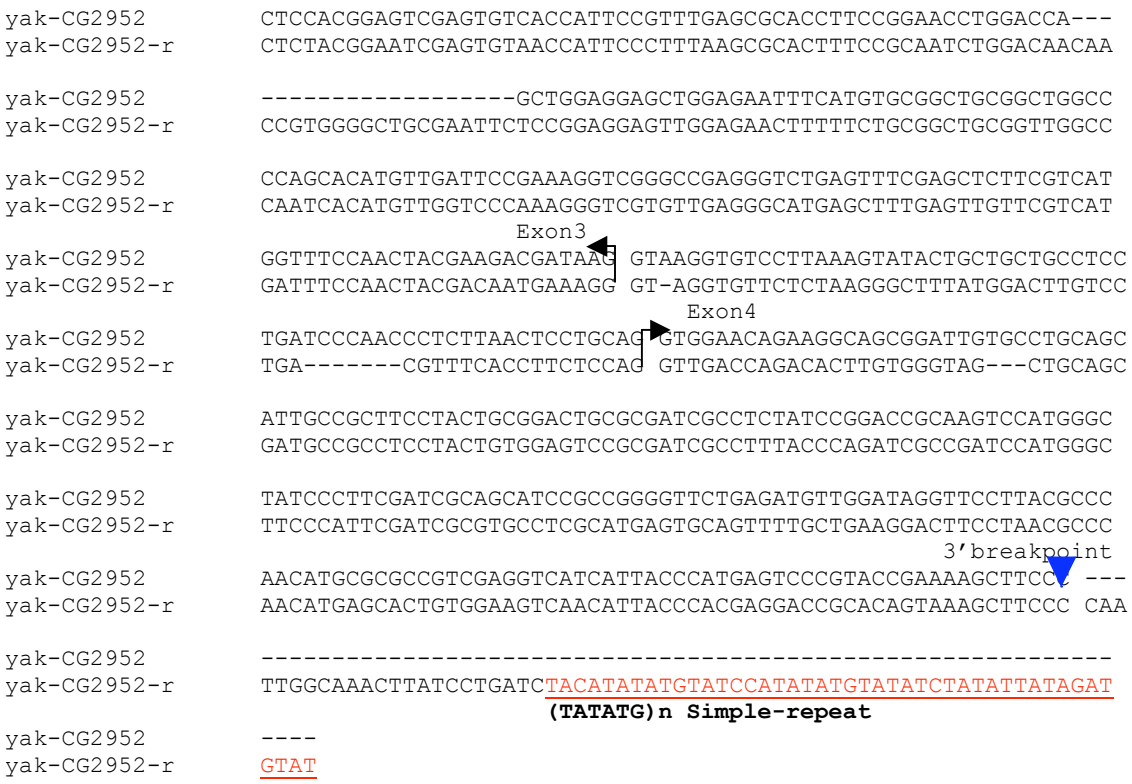
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yak-CG2952 ----------GCTGGAGGAGCTGGAGAATTTCATGTGCGGCTGCGGCTGGCC
yak-CG2952-r CCGTGGGGCTGCGAATTCTCCGGAGGAGTTGGAGAACTTTTTCTGCGGCTGCGGTTGGCC
yak-CG2952 CCAGCACATGTTGATTCCGAAAGGTCGGGCCGAGGGTCTGAGTTTCGAGCTCTTCGTCAT
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Exon3
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Exon4
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