**DEC\_1**

>mm10\_dna range=chr9:64255311-64255550 5'pad=0 3'pad=0 strand=+ repeatMasking=none

CTTGCTGAGAGCCCAGGCTCATATCCAGCACCTGCATGATGGTTCCCAATTATCCACCACTCCAGTTCCAGGAGAGCCTGCATTCTCTGCTGACCCCCAAGGGCACCAGGCACACACATGGTGCACATATGTACATGCAGGCAAAACACAAATACATATAAAACAAAAATAAATTTCTGAAAATACACATTCCAGCTTCCTCTTTTGAAACCACTCAGACTTAAAGACACTAGGTATAAG

dec\_dis\_92\_wt:

5’tggcctaactggccgCTTGCTGAGAGCCCAGGCTCATATCCAGCACCTGCATGATGGTTCCCAATTATCCACCACTCCAGTTCCAGGAGAGCCTGCATTCTCTGCTGACCCCCAAGGGCACCAGGCACACACATGGTGCACATATGTACATGCAGGCAAAACACAAATACATATAAAACAAAAATAAATTTCTGAAAATACACATTCCAGCTTCCTCTTTTGAAACCACTCAGACTTAAAGACACTAGGTATAAGtcgaggatatcaaga3’

dec\_dis\_92\_mt\_anrtd:

5’tggcctaactggccgCTTGCTGAGAGCCCAGGCTCATATCCAGCACCTGCATGATGGTTCCCAATTATCCACCACTCCAGTTCCAGGAGAGCCTGCATTCTCTGCTGACCACCAAGGGCACCAGGCACACACATGGTGCACATATGTACATGCAGGCAAAACACAAATACATATAAAACAAAAATAAATTTCTGAAAATACACATTCCAGCTTCCTCTTTTGAAACCACTCAGACTTAAAGACACTAGGTATAAGtcgaggatatcaaga3’

dec\_disn50mtinjanrtd:

5’tggcctaactggccgCTTGCTGAGAGCCCAGGCTCATATCCAGCACCTGCATGATGGTTCCCAATTATCCACCACTCCAGTTCCAGGAGAGCCTGCATTCTCTGCTGACCACCAAGGGCACCAGGCACACACATGGTGCACATATGTACATGCAGGCAAAACCCCCCAAGGGCAACAAATACATATAAAACAAAAATAAATTTCTGAAAATACACATTCCAGCTTCCTCTTTTGAAACCACTCAGACTTAAAGACACTAGGTATAAGtcgaggatatcaaga3’

dec\_disn20mtinjanrtd:

5’tggcctaactggccgCTTGCTGAGAGCCCAGGCTCATATCCAGCACCTGCATGATGGTTCCCAATTATCCACCACTCCAGTTCCAGGAGAGCCTGCATTCTCTGCTGACCACCAAGGGCACCAGGCACACACATGGTGCACATATGTACATGCAGGCAAAACACAAATACATATAAAACAAAAATAAATTTCCCCCCAAGGGCATGAAAATACACATTCCAGCTTCCTCTTTTGAAACCACTCAGACTTAAAGACACTAGGTATAAGtcgaggatatcaaga3’

**INC**

>mm10\_dna range=chr3:79262046-79262295 5'pad=0 3'pad=0 strand=+ repeatMasking=none

ATCCTGGTCAAACACTAATCCAACTGTCTCTCTGAACACACATCAGACAACAGAGTCGCTGACAACTGAAGCCAGGATCCCTAGGGCAAAGGTTAGAAATGCCAGGAATGTTCTACTCTCCCATGCAAACCACCCTGCTGTGGCTTCCAACCAGAAAGCTGGCTCCCTAGATGAGAGGCTGTTCCCTAGTCACTGCAGTCTGGCACTGGAAGCCAAGATCTCCAGCTAAGCCCCTACACA

Inc\_dis\_24\_wt:

5’tggcctaactggccgATCCTGGTCAAACACTAATCCAACTGTCTCTCTGAACACACATCAGACAACAGAGTCGCTGACAACTGAAGCCAGGATCCCTAGGGCAAAGGTTAGAAATGCCAGGAATGTTCTACTCTCCCATGCAAACCACCCTGCTGTGGCTTCCAACCAGAAAGCTGGCTCCCTAGATGAGAGGCTGTTCCCTAGTCACTGCAGTCTGGCACTGGAAGCCAAGATCTCCAGCTAAGCCCCTACACAtcgaggatatcaaga 3’

Inc\_dis\_24\_tdmut:

5’tggcctaactggccgATCCTGGTCAAACACTAATCCAACTGTCTCTCTGAACACACATCAGACAACAGAGTCGCTGACAACTGAAGCCAGGATCCCTAGGGCAAAGGTTAGAAATGCCAGGACTGTTCTACTCTCCCATGCAAACCACCCTGCTGTGGCTTCCAACCAGAAAGCTGGCTCCCTAGATGAGAGGCTGTTCCCTAGTCACTGCAGTCTGGCACTGGAAGCCAAGATCTCCAGCTAAGCCCCTACACAtcgaggatatcaaga 3’

Inc\_dis\_45\_tdmut-inj:

5’tggcctaactggccgATCCTGGTCAAACACTAATCCAACTGTCTCTCTGAACACACATCAGACAACAGAGTCGCTGACAACTGAAGCCAGGATCCCTAGGGCAAAGGTTAGAAATGCCAGGACTGTTCTACTCTCCCCCAGGAATGTATGCAAACCACCCTGCTGTGGCTTCCAACCAGAAAGCTGGCTCCCTAGATGAGAGGCTGTTCCCTAGTCACTGCAGTCTGGCACTGGAAGCCAAGATCTCCAGCTAAGCCCCTACACAtcgaggatatcaaga 3’

Inc\_dis\_80\_tdmut-inj:

5’tggcctaactggccgATCCTGGTCAAACACTAATCCAACTGTCTCTCTGAACACACATCAGACAACAGAGTCGCTGACAACTGAAGCCAGGATCCCTAGGGCAAAGGTTAGAAATGCCAGGACTGTTCTACTCTCCCATGCAAACCACCCTGCTGTGGCTTCCAACCAGAAACCAGGAATGTGCTGGCTCCCTAGATGAGAGGCTGTTCCCTAGTCACTGCAGTCTGGCACTGGAAGCCAAGATCTCCAGCTAAGCCCCTACACAtcgaggatatcaaga 3’

**OPTI**

>mm10\_dna range=chr1:33981020-33981269 5'pad=0 3'pad=0 strand=+ repeatMasking=none

CTCCTACCCCTCCCCACTTCCTTTTCCTCCTTTTTCTTGTTTGCTTTTGT

TTGTTTTTGTTTTGTTTCATTTTTTCCCCCTGAGGCAGGGAAGCCTATCT

CAGTGTAGCTCCAACTATCCTGGAATGTCAGAGATTCCCCTGCCTCTGCC

TCCAGAGACAGAGTTGGAACTGTTGGGTCTGTGAGTGGGAAGTGAAATTG

TGTCAGCTGGATGCCAGGCATTCTCTGACCACTCTGGAAGTTAGTCAGTG

CTCCTACCCCTCCCCACTTCCTTTTCCTCCTTTTTCTTGTTTGCTTTTGTTTGTTTTTGTTTTGTTTCATTTTTTCCCCCTGAGGCAGGGAAGCCTATCTCAGTGTAGCTCCAACTATCCTGGAATGTCAGAGATTCCCCTGCCTCTGCCTCCAGAGACAGAGTTGGAACTGTTGGGTCTGTGAGTGGGAAGTGAAATTGTGTCAGCTGGATGCCAGGCATTCTCTGACCACTCTGGAAGTTAGTCAGTG

1000 bp

chr1:33,980,643-33,981,642

opti\_dis\_42\_wt:

5’tggcctaactggccgCTCCTACCCCTCCCCACTTCCTTTTCCTCCTTTTTCTTGTTTGCTTTTGTTTGTTTTTGTTTTGTTTCATTTTTTCCCCCTGAGGCAGGGAAGCCTATCTCAGTGTAGCTCCAACTATCCTGGAATGTCAGAGATTCCCCTGCCTCTGCCTCCAGAGACAGAGTTGGAACTGTTGGGTCTGTGAGTGGGAAGTGAAATTGTGTCAGCTGGATGCCAGGCATTCTCTGACCACTCTGGAAGTTAGTCAGTGtcgaggatatcaaga 3’

opti\_dis\_42\_mt\_anrtd:

5’tggcctaactggccgCTCCTACCCCTCCCCACTTCCTTTTCCTCCTTTTTCTTGTTTGCTTTTGTTTGTTTTTGTTTTGTTTCATTTTTTCCCGCTGAGGCAGGGAAGCCTATCTCAGTGTAGCTCCAACTATCCTGGAATGTCAGAGATTCCCCTGCCTCTGCCTCCAGAGACAGAGTTGGAACTGTTGGGTCTGTGAGTGGGAAGTGAAATTGTGTCAGCTGGATGCCAGGCATTCTCTGACCACTCTGGAAGTTAGTCAGTGtcgaggatatcaaga 3’

opti\_disn90mt2injanrtd:

5’tggcctaactggccgCTCCTACCCCTCCCCACTTCCTTTTCCTCCTTTTTCTTGTTTGCTTTTGTTTGTTTTTGTTTTGTTTCATTTTTTCCCGCTGAGGCAGGGAAGCCTATCTCAGTGTAGCTCCAACTATCCTGGAATGTCAGAGATTCCCCTGCCTCTGCCTCCAGAGACAGAGTTGGAACTGTTGGGTCTGTGAGTGGGAAGTGAAATTGTGTCAGCCCCCCTGAGGCATGGCTGCCAGGCCTTCTCTGACCACTCTGGAAGTTAGTCAGTGtcgaggatatcaaga 3’

dec\_disn20mtinjanrtd:

5’tggcctaactggccgCTCCTACCCCTCCCCACTTCCTTTTCCTCCTTTTTCTTGTTTGCTTTTGTTTGTTTTTGTTTTGTTTCATTTTTTCCCGCTGAGGCAGGGAAGCCTATCTCAGTGTAGCTCCAACTATCCTGGAATGTCAGAGATTCCCCCCTGAGGCACCCTGCCTCTGCCTCCAGAGACAGAGTTGGAACTGTTGGGTCTGTGAGTGGGAAGTGAAATTGTGTCAGCTGGATGCCAGGCATTCTCTGACCACTCTGGAAGTTAGTCAGTGtcgaggatatcaaga 3’

**DEC\_2**

>mm10\_dna range=chr8:88284750-88284999 5'pad=0 3'pad=0 strand=+ repeatMasking=none

TCTTTAACTGAACCCTCACAGTCTCAACCATCAGTGTAGAATTGTCCTGA

CTTTACAGAGGCTCACTGGAATGCTGCGGCTAGGATGAGGTCACACACAC

GGAAGCTAAGCTCTGTCTGTGCGGCTTCATTGCTCTGGGGCAAGGAACTG

GGCTGGTGTGAGCTTCCAGCCGATTGCTCACAGTGTGCTGAACCCCTGAG

GCAGGGGAGGAAGACCACAGCTGTGAGGTGATGGGACGGAGTGAAGGCGG

TCTTTAACTGAACCCTCACAGTCTCAACCATCAGTGTAGAATTGTCCTGACTTTACAGAGGCTCACTGGAATGCTGCGGCTAGGATGAGGTCACACACACGGAAGCTAAGCTCTGTCTGTGCGGCTTCATTGCTCTGGGGCAAGGAACTGGGCTGGTGTGAGCTTCCAGCCGATTGCTCACAGTGTGCTGAACCCCTGAGGCAGGGGAGGAAGACCACAGCTGTGAGGTGATGGGACGGAGTGAAGGCGG

dec\_dis\_118\_wt:

5’tggcctaactggccgTCTTTAACTGAACCCTCACAGTCTCAACCATCAGTGTAGAATTGTCCTGACTTTACAGAGGCTCACTGGAATGCTGCGGCTAGGATGAGGTCACACACACGGAAGCTAAGCTCTGTCTGTGCGGCTTCATTGCTCTGGGGCAAGGAACTGGGCTGGTGTGAGCTTCCAGCCGATTGCTCACAGTGTGCTGAACCCCTGAGGCAGGGGAGGAAGACCACAGCTGTGAGGTGATGGGACGGAGTGAAGGCGGtcgaggatatcaaga3’

dec\_dis\_118\_mt\_anrtf:

5’tggcctaactggccgTCTTTAACTGAACCCTCACAGTCTCAACCATCAGTGTAGAATTGTCCTGACTTTACAGAGGCTCACTGGACTGCTGCGGCTAGGATGAGGTCACACACACGGAAGCTAAGCTCTGTCTGTGCGGCTTCATTGCTCTGGGGCAAGGAACTGGGCTGGTGTGAGCTTCCAGCCGATTGCTCACAGTGTGCTGAACCCCTGAGGCAGGGGAGGAAGACCACAGCTGTGAGGTGATGGGACGGAGTGAAGGCGGtcgaggatatcaaga3’

dec\_disn75mtinjanrtf:

5’tggcctaactggccgTCTTTAACTGAACCCTCACAGTCTCAACCATCAGTGTAGAATTGTCCTGACTTTACAGAGGCTCACTGGACTGCTGCGGCTAGGATGAGGTCACACACACGGAAGCTAAGCTCTGTCTGTGCGGCTTACTGGAATGCCATTGCTCTGGGGCAAGGAACTGGGCTGGTGTGAGCTTCCAGCCGATTGCTCACAGTGTGCTGAACCCCTGAGGCAGGGGAGGAAGACCACAGCTGTGAGGTGATGGGACGGAGTGAAGGCGGtcgaggatatcaaga3’

dec\_disn30mtinjanrtf:

5’tggcctaactggccgTCTTTAACTGAACCCTCACAGTCTCAACCATCAGTGTAGAATTGTCCTGACTTTACAGAGGCTCACTGGACTGCTGCGGCTAGGATGAGGTCACACACACGGAAGCTAAGCTCTGTCTGTGCGGCTTCATTGCTCTGGGGCAAGGAACTGGGCTGGTGTGAGCTTCCAGCCGACTGGAATGCATTGCTCACAGTGTGCTGAACCCCTGAGGCAGGGGAGGAAGACCACAGCTGTGAGGTGATGGGACGGAGTGAAGGCGGtcgaggatatcaaga 3’