

S2

ATG_1

$\alpha 1$ -WT (496) TCGCAGCAGGGTAAGAGACACCAACACC**ATG**TTTCTGCACGAAGCTCAAGG
 C* $\alpha 1$ (276) TCGCAGCAGGGTAAGAGACACCAACACCATGTTCTGCACGAAGCTCAAGG
 C- $\alpha 1$ (167) -----

$\alpha 1$ -WT (546) ATCTCAAGATCACAGGAGAGTGTCTTTCTCCTTACTGGCACCAGGTCAA
 C* $\alpha 1$ (326) ATCTCAAGATCACAGGAGAGTGTCTTTCTCCTTACTGGCACCAGGTCAA
 C- $\alpha 1$ (167) -----GTCAA

$\alpha 1$ -WT (596) GTTCCTAACGAGTCTTCAGAGGAGGCAGCAGGAAGCTCAGAGAGCTGCCAA
 C* $\alpha 1$ (376) GTTCCTAACGAGTCTTCAGAGGAGGCAGCAGGAAGCTCAGAGAGCTGCCAA
 C- $\alpha 1$ (172) GTTCCTAACGAGTCTTCAGAGGAGGCAGCAGGAAGCTCAGAGAGCTGCCAA

$\alpha 1$ -WT (646) AGCAACCGTGCCCATCTGTCAAGACATTCCTGAGAAGAACATACAAGAAA
 C* $\alpha 1$ (426) AGCAACCGTGCCCATCTGTCAAGACATTCCTGAGAAGAACATACAAGAAA
 C- $\alpha 1$ (222) AGCAACCGTGCCCATCTGTCAAGACATTCCTGAGAAGAACATACAAGAAA

$\alpha 1$ -WT (696) GTCTTCCTCAAAGAAAAACCAGTCGGAGCCGAGTCTATCTTCACACTTTG
 C* $\alpha 1$ (476) GTCTTCCTCAAAGAAAAACCAGTCGGAGCCGAGTCTATCTTCACACTTTG
 C- $\alpha 1$ (272) GTCTTCCTCAAAGAAAAACCAGTCGGAGCCGAGTCTATCTTCACACTTTG

$\alpha 1$ -WT (746) GCAGAGAGTATTTGCAAACCTGATTTTCCCAGAGTTTGAACGGCTGAATGT
 C* $\alpha 1$ (526) GCAGAGAGTATTTGCAAACCTGATTTTCCCAGAGTTTGAACGGCTGAATGT
 C- $\alpha 1$ (322) GCAGAGAGTATTTGCAAACCTGATTTTCCCAGAGTTTGAACGGCTGAATGT

$\alpha 1$ -WT (796) TGCACTTCAGAGAACATTGGCAAAGCACAAAATAAAAGAAAGCAGGAAAT
 C* $\alpha 1$ (576) TGCACTTCAGAGAACATTGGCAAAGCACAAAATAAAAGAAAGCAGGAAAT
 C- $\alpha 1$ (372) TGCACTTCAGAGAACATTGGCAAAGCACAAAATAAAAGAAAGCAGGAAAT

$\alpha 1$ -WT (846) CTTTGGAAAGAGAAGACTTTGAAAAACAATTGCAGAGCAAGCAGTTGCA
 C* $\alpha 1$ (626) CTTTGGAAAGAGAAGACTTTGAAAAACAATTGCAGAGCAAGCAGTTGCA
 C- $\alpha 1$ (422) CTTTGGAAAGAGAAGACTTTGAAAAACAATTGCAGAGCAAGCAGTTGCA

$\alpha 1$ -WT (896) GCAGGAGTTCAGTGGAGGTTATCAAAGAATCTCTTGGTGAAGAGGTTTT
 C* $\alpha 1$ (676) GCAG-----
 C- $\alpha 1$ (472) GCAGGAGTTCAGTGGAGGTTATCAAAGAATCTCTTGGTGAAGAGGTTTT

$\alpha 1$ -WT (946) TAAAATATGTTACGAGGAAGATGAAAACATCCTTGGGGTGGTTGGAGGCA
 C* $\alpha 1$ (680) -----
 C- $\alpha 1$ (522) TAAAATATGTTACGAGGAAGATGAAAACATCCTTGGGGTGGTTGGAGGCA

$\alpha 1$ -WT (996) CCCTTAAAGATTTTTTAAACAGCTTCAGTACCCTTCTGAAACAGAGCAGC
 C* $\alpha 1$ (680) -----AG--CAGC
 C- $\alpha 1$ (572) CCCTTAAAGATTTTTTAAACAGCTTCAGTACCCTTCTGAAACAGAGCAGC

$\alpha 1$ -WT (1046) CATTGCCAAGAAGCAGGAAAAAGGGGCAGGCTTGAGGACGCCTCCATTCT
 C* $\alpha 1$ (686) CATTGCCAAGAAGCAGGAAAAAGGGGCAGGCTTGAGGACGCCTCCATTCT
 C- $\alpha 1$ (622) CATTGCCAAGAAGCAGGAAAAAGGGGCAGGCTTGAGGACGCCTCCATTCT

$\alpha 1$ -WT (1096) ATGCCTGGATAAGGAGGATGATTTTCTACATGTTTACTACTTCTTCCCTA
 C* $\alpha 1$ (736) ATGCCTGGATAAGGAGGATGATTTTCTACATGTTTACTACTTCTTCCCTA
 C- $\alpha 1$ (672) ATGCCTGGATAAGGAGGATGATTTTCTACATGTTTACTACTTCTTCCCTA

$\alpha 1$ -WT (1146) AGAGAACCACCTCCCTGATTCTTCCCAGCATCATAAAGCAGCTGCTCAC
 C* $\alpha 1$ (786) AGAGAACCACCTCCCTGATTCTTCCCAGCATCATAAAGCAGCTGCTCAC
 C- $\alpha 1$ (722) AGAGAACCACCTCCCTGATTCTTCCCAGCATCATAAAGCAGCTGCTCAC

$\alpha 1$ -WT (1196) GTATTATATGAAACGGAAGTGGAAGTGTGTTAATGCCTCCCTGCTTCCA
 C* $\alpha 1$ (836) GTATTATATGAAACGGAAGTGGAAGTGTGTTAATGCCTCCCTGCTTCCA
 C- $\alpha 1$ (772) GTATTATATGAAACGGAAGTGGAAGTGTGTTAATGCCTCCCTGCTTCCA

ATG_236

$\alpha 1$ -WT (1246) TAATGATTGCAGCGAGTTTGTGAATCAGCCCTACTTGTGTACTCCGTTT
 C* $\alpha 1$ (886) TAATGATTGCAGCGAGTTTGTGAATCAGCCCTACTTGTGTACTCCGTTT
 C- $\alpha 1$ (822) TAATGATTGCAGCGAGTTTGTGAATCAGCCCTACTTGTGTACTCCGTTT

$\alpha 1$ -WT (1296) ACATGAAAAGCACCAGCCATCCCTGTCCCCAGCAAACCCAGTCCTCG
 C* $\alpha 1$ (936) AC**ATG**AAAAGCACCAGCCATCCCTGTCCCCAGCAAACCCAGTCCTCG
 C- $\alpha 1$ (872) AC**ATG**AAAAGCACCAGCCATCCCTGTCCCCAGCAAACCCAGTCCTCG

ATG_259