

Supplementary File 1: Coding sequences of yeast *SCS2* and human *VAPB* used in this study

1-1: *SCS2*^{WT}

1-2: *scs2*^{P51S, P58S}

1-3: *VAPB*^{WT}

1-4: *VAPB*^{P56S}

For mutant alleles, nucleotide substitutions are noted in lowercase. Underlined sequences correspond to missense mutations resulting in *scs2*^{P51S, P58S} and *VAPB*^{P56S} alleles. Red text in the *scs2*^{P51S, P58S} coding sequence indicate PvuI and NheI sites that were intentionally introduced with silent mutations to facilitate detection of the mutant allele in future applications.

1-1: *SCS2 (WT)*

ATGTCTGCTGTTGAAATTTCCCCTGACGTGTTGGTGTATAAGTCTCCATTAACGGAGCAATCGACAGAATACGCTAG
TATTTCCAACAATTGACACCAAACCATTGCATTTAAGGTCAAGACCACAGCCCCAAAGTTTTACTGCGTGAGACCAA
ACGCCGCAGTTGTTGCTCCAGGTGAAACAATCCAGGTTCAAGTTATCTTCCTGGGTTTGACTGAAGAGCCTGCCGCA
GACTTTAAGTGCCGTGACAAGTTCCTGGTTATCACGTTGCCTTCTCCTTACGACCTCAATGGCAAGGCTGTTGCAGA
TGTTTGGTCCGACTTGGAGGCTGAGTTCAAGCAACAGGCTATCTCTAAAAAGATAAAAGTCAAATATTTGATAAGTC
CAGATGTACACCCAGCACAGAACCAAAATATACAGGAAAACAAGGAACTGTTGAACCAAGTAGTCCAAGACAGTGAG
CCAAAGGAAGTGCCTGCTGTGGTAAACGAAAAGGAGGTCCTGCTGAACCGGAACTCAACCTCCCGTCCAAGTAAA
GAAAGAAGAGGTCCACCTGTCGTTTCAGAAAACCGTTTCCTCATGAAAATGAGAAGCAAACGTCCAACAGCACTCCGG
CCCCACAGAACCAGATAAAGGAAGCCGCAACCGTACCTGCAGAAAATGAATCATCCAGCATGGGTATATTCATATTG
GTTGCACTCCTTATCTTGGTTTTAGGATGGTTCTACAGATAA

1-2: *scs2 (P51S, P58S)*

ATGTCTGCTGTTGAAATTTCCCCTGACGTGTTGGTGTATAAGTCTCCATTAACGGAGCAATCGACAGAATACGCTAG
TATTTCCAACAATTGACACCAAACCATTGCATTTAAGGTCAAGACCACAGCCCCAAAGTTTTACTGCGTGcGAtCgA
ACGCCGCAGTTGTTGCTagcGGTGAACAATCCAGGTTCAAGTTATCTTCCTGGGTTTGACTGAAGAGCCTGCCGCA
GACTTTAAGTGCCGTGACAAGTTCCTGGTTATCACGTTGCCTTCTCCTTACGACCTCAATGGCAAGGCTGTTGCAGA
TGTTTGGTCCGACTTGGAGGCTGAGTTCAAGCAACAGGCTATCTCTAAAAAGATAAAAGTCAAATATTTGATAAGTC
CAGATGTACACCCAGCACAGAACCAAAATATACAGGAAAACAAGGAACTGTTGAACCAAGTAGTCCAAGACAGTGAG
CCAAAGGAAGTGCCTGCTGTGGTAAACGAAAAGGAGGTCCTGCTGAACCGGAACTCAACCTCCCGTCCAAGTAAA
GAAAGAAGAGGTCCACCTGTCGTTTCAGAAAACCGTTTCCTCATGAAAATGAGAAGCAAACGTCCAACAGCACTCCGG
CCCCACAGAACCAGATAAAGGAAGCCGCAACCGTACCTGCAGAAAATGAATCATCCAGCATGGGTATATTCATATTG
GTTGCACTCCTTATCTTGGTTTTAGGATGGTTCTACAGATAA

1-3: *VAPB (WT)*

ATGGCGAAGGTGGAGCAGGTCTGAGCCTCGAGCCGCAGCACGAGCTCAAATTCGAGGTCCCTTCACCGATGTTGT
CACCACCAACCTAAAGCTTGGCAACCCGACAGACCGAAATGTGTGTTTTAAGGTGAAGACTACAGCACCACGTAGGT
ACTGTGTGAGGCCCAACAGCGGAATCATCGATGCAGGGGCCTCAATTAATGTATCTGTGATGTTACAGCCTTTTCGAT
TATGATCCCAATGAGAAAAGTAAACACAAGTTTATGGTTTCAGTCTATGTTTGCTCCAAGTACACTTCAGATATGGA
AGCAGTATGGAAGGAGGCAAAACCGGAAGACCTTATGGATTCAAAACTTAGATGTGTGTTTGAATTGCCAGCAGAGA
ATGATAAACCACATGATGTAGAAATAAATAAAATTATATCCACAAGTGCATCAAAGACAGAAACACCAATAGTGTCT
AAGTCTCTGAGTTCTTCTTTGGATGACACCGAAGTTAAGAAGGTTATGGAAGAATGTAAGAGGCTGCAAGGTGAAGT
TCAGAGGCTACGGGAGGAGAACAAGCAGTTCAAGGAAGAAGATGGACTGCGGATGAGGAAGACAGTGCAGAGCAACA
GCCCCATTTTCAGCATTAGCCCCAACTGGGAAGGAAGAAGGCCTTAGCACCCGGCTCTTGGCTCTGGTGGTTTTGTTC
TTTATCGTTGGTGTAAATTATTGGGAAGATTGCCTTGTAG

1-4: *VAPB (P56S)*

ATGGCGAAGGTGGAGCAGGTCTGAGCCTCGAGCCGCAGCACGAGCTCAAATTCGAGGTCCCTTCACCGATGTTGT
CACCACCAACCTAAAGCTTGGCAACCCGACAGACCGAAATGTGTGTTTTAAGGTGAAGACTACAGCACCACGTAGGT
ACTGTGTGAGGtCCAACAGCGGAATCATCGATGCAGGGGCCTCAATTAATGTATCTGTGATGTTACAGCCTTTTCGAT
TATGATCCCAATGAGAAAAGTAAACACAAGTTTATGGTTTCAGTCTATGTTTGCTCCAAGTACACTTCAGATATGGA
AGCAGTATGGAAGGAGGCAAAACCGGAAGACCTTATGGATTCAAAACTTAGATGTGTGTTTGAATTGCCAGCAGAGA
ATGATAAACCACATGATGTAGAAATAAATAAAATTATATCCACAAGTGCATCAAAGACAGAAACACCAATAGTGTCT
AAGTCTCTGAGTTCTTCTTTGGATGACACCGAAGTTAAGAAGGTTATGGAAGAATGTAAGAGGCTGCAAGGTGAAGT
TCAGAGGCTACGGGAGGAGAACAAGCAGTTCAAGGAAGAAGATGGACTGCGGATGAGGAAGACAGTGCAGAGCAACA
GCCCCATTTTCAGCATTAGCCCCAACTGGGAAGGAAGAAGGCCTTAGCACCCGGCTCTTGGCTCTGGTGGTTTTGTTC
TTTATCGTTGGTGTAAATTATTGGGAAGATTGCCTTGTAG