

Promoter sequences. MoClo fusion sites are underlined.

Viral promoters:

P_{AVCP1}

ggagGATGACGCTCTTGTGGAAGTCAGAGTACACAAACGAGTCCGGCACAAAGGATCCATAGTGCCCGTTACCCTCTTCTGTG
CCAGACATAACCACGCCCCTGGGATATGCTTCTTGTGCCACAGAATATCTGTACCAGCGTGGTTTTGCGGGTTCCTCGCTT
ACCAATAAACACACAGGTTTCGGTTGTCTCCTATAGTAGACGGGTCAAACCTTTTTTAGCTTCAGGCTCATGGTGATTGCGTGAG
GATAGAGTGGTGAGCAAGAAGGCACTGCAGATGTCAGGCAAAGAGCGTTTACGTGATTCTGCTGTGCGCGGTCTGTGTGTCTG
TCTGTATGTATAGTGAAGCAAAACAAAAATCCCAGCGCAGTTTTCTTGTCAATAGCGCGCACGTGTTTTCTATTTAAAGTT
TGAATGGACGCTTAGGAAGAAAGAGTCGCACGTCTCGGGGGGAGGTAATCCCCGCCACGCAGCCAACACACaatg

P_{AVCP2}

ggagCTGGCATTCCATAAGGGTTAGGGCACACGTGTCATTGTGAGTGACCCAGTGCAGATGGATGAAAGGAATCGTCATCATG
TACAGCATCAGAAGGTGCTTGTTAGTGGCCCATGGTCCAGCAGAACGAACACGATAAGTACCAGGTGCAGCGCCGCTATGAG
GGTTGCAGCATACAGCTGCTGCTTAACGTTTACCCTTGCTGGCTTTTCGTTGTTGTTATCCATGCCTTTTGTTCAGCTGGGG
CGGGATAATCGTCAGATTGATGGTGTTAACGCTTTGTACCAGGTAGGTGGATGCGACGACCGAGCACGAGTGTTTAAAGAGTGC
GCACATGATTTATAAGGAAGTGTACGCAACCCGAAGCGTAATGATTAAGGGTGAGAATGAGTAGTGCAGCTGTTGTGCCTGT
GTATTCGTTTCAGTCACACAAAATATATTGGATTGCATACGATAGGAATCACTCATAAACAACTTCACAAACaatg

P_{AVDPol}

ggagAAGCTAGACCACGTGGCGGGCCACTTCCTGGACGAGCACAAAGATCGACCTCGCCATCCCGGAGATGTTCCGGCTGTTCC
AAGGAAGCGCTCGTGACCGGAGCAAGATTGCAGAGTACTGTGTGCGTGACACGGAGTTGCCGCTGAAGCTGCTGTCCAGGCTG
GCCATCCTACCGAACATGCTGGAGATGGCAAAGGTGATGCACGTCCCCATTGAATACCTCATCCCGGAGGTCAACAGATCAA
GGACTTCTATCAGTTTCTAAAGAAGTCCCAGCGAGCGTGGGTACCTTTGCCCTGGACCTAAACTCAAACCGAAATGTAAATAT
GTTACACGTAACAACGTTGGATAGATAGCTGGTCGTTGATTCATTTTGATGAATTGATACATCGAATGTTCAAGAGGGTGATG
CGATAATGACTTAAAGACAGGGCACCTTTCAGGGTCTTAAAGACCTGACTCAGGTGGATAAACTGTGACCGCTGCACGACAGA
GGAATTGAGCTGCAATATTAACAaatg

P_{IVCP1}

ggagTCCGCAGCGGCATGGGCCTGCGCATCAGGTGGTGGCAGCGCCACTATCGGCACCGACTCTGCCACCTCAGGAGCTGCGT
CAGCCACCACCAGCGACGCAGGTGcCTTCTTCCGGGTGGCTGTGACCTTCTTCGGGGCCGACGCTCTGGGGTCTGTGCTTTT
GTGGCGCCAGCCTTGCTTGTGTTGGCTCTGGGGCGTTTGGGCGCTACAGCAGCGGGCCTGCAGGCCCTGCAGCAGCGGCAGA
TGAGGCATCATCATCCTCAGTGGGTGCGGGTGCGGCAGCCTTGGTGGCCTTCGACACGCCCCCAGGAGCGCGCGGATGGCCA
TACTGTACTGACGGTGACTAGAATGGTGCGCGCGGGGTATCAAGATGCACCACCAGGTGGTGCAGAGCCTTAAGCTCTTTGAAA
GGGGCACTCCGTGTCTCGAACCTGCGCGACTGTCTGTGGCGCCCAACCTGTTGAAGAGGCTTGTGGAGTGGCACACAGTAT
CAAGCaatg

P_{IVCP2}

ggagCTGCACTACATTGCGGATGTGGTGCCTGCCGATCGCCGTGAATCTGTGATGAACAAGGTTCAGGGAGTTGCAGATAATTG
AGGAGCAGCTGCAGCTGCAGGCCTCGTATGTAGAGaGTCTCGGAATGTCGGTTTCAAATGTAACCTGGCACGACAACAAGGTG
TCCGTCGACGTGTCTTTGACAAGATTGACTTCAAGAAGTTGGAAGCCCTGATCAAGACAGGCAGCAGGCCAAGCACCGTGTT
TGAAATGCAGCTGGAAGCCCTGAATGGCACACTCAGCAGTCTCACCGACATTGCGGGTGACACGTACTTGGAGGGCGACGCGG
TGGTGTACAGCGTGGAGGGCACAGACCCTGACGACCAGACACGTACGAGCTCGTGTTTGCTGACATCACCATTTCTTACACC
CAAAGCTACTGAAAAATCAGGGACGAATGAAGCTGCGTCTGCTCAAATCTTTTTTCTCAAGTTAGACCATAGTCAGAGGAG
CAAAAaatg

P_{IVRPol}

ggagCGTTTCGAGTCTGTTCTGCCTCCACACCCATGAGCCTCCCCACTGGGGACGTGAGGCTGGGATCCGTCACGGTGGAGAA
CTTGAGAGCGCTTCCGCGACGAGGAGGTGAGGTACATCTCAACGCGCAGTCACCCGAGGGTGGCCCCCAATGGCTGTGCAGC
TCACATCCCAGCAGCGCCCTGAGAAGCCCCAGGGCAGTCTTCGAGAAAATGGTGACAGGATCGCGACACCTGCGGTGATGG
CGTATTGCCGACCCCTACCTTTCTTTCGGGCAATGATTGCGCGCTTTCGGCGGAAGTAGGTTCCCCGCTCCAGCACACGACG
GCCACGCGCTGGCTATTAGGATCACCATGTCTGCGGGCAGCATGGTGTTGCTGTACTGAGATGCCCTGTTCTTTGGGTCTGG
CTCTCGCCGCGAAAAAGACATAAGGGCTCGGTGGGCCAGTACTTGGTAGGACACCCGGCCTCAATCGGCAGGGAATTTAGCGC
GCAACaatg

Benchmark promoters:

P_{PSAD}

PSAD Promoter, PSAD 5'UTR

ggagCACACACCTGCCGTCTGCCTGACAGGAAGTGAACGCATGTCGAGGGAGGCCTCACCAATCGTCACACGAGCCCTCGTC
AGAAACACGTCTCCGCCACGCTCTCCCTCTCACGGCCGACCCCGCAGCCCTTTTGCCCTTTCCTAGGCCACCGACAGGACCCA
GGCGCTCTCAGCATGCCTCAACAACCCGTA CTCTGCGCAGCGGTGCCCTTGTGCTGGTGATCGCTTGGAAAGCGCATGCGATGA
CGAAGGGGCGGAGCAGGCGGCCTGGCTGTTTGAAGGGCTCGCCGCCAGTTCGGGTGCCTTCTCCACGCGCGCCTCCACACCT
ACCGATGCGTGAAGGCAGGCAAATGCTCATGTTTGCCCGAACTCGGAGTCCTTAAAAAGCCGCTTCTTGTGCTCGTTCGAGAG
CATGTTAGCAGATCGCAGTGCCACCTTTCCTGACGCGCTCGGCCCATATTCGGACGCAATTGTCATTTGTAGCACAAATTGGA
GCAAATCTGGCGAGGCAGTAGGCTTTTAAGTTGCAAGGCGAGAGAGCAAAGTGGGACGCGGCGTGATTATTGGTATTTACGCG
ACGGCCCGGCGCGTTAGCGGCCCTTCCCCAGGCCAGGGACGATTATGTATCAATATTGTTGCGTTCGGGCACTCGTGCGAGG
GCTCCTGCGGGCTGGGGAGGGGGATCTGGGAATTGGAGGTACGACCGAGATGGCTTGCTCGGGGGGAGGTTTCTCGCCGAGC
AAGCCAGGGTTAGGTGTTGCGCTCTTGACTCGTTGTGCATTCTAGGACCCCACTGCTACTCACAACAAGCCaatg

P_{AR}

HSP70A Promoter, RBCS2 Promoter, RBCS2 5'UTR

ggagGAAGGGCCGCGACGGTTTCGAGAACCGACTTGAGGGCGCCAAACGAGCCCGAGCCGCCGTTGCGCCAGGCGAAACCAGAA
CCGTAGATTAATGCACTTGAGCTATTCATTGGAGCGATCTGCCGGGGACAGCGGGTCTGGCGTGCGCGGATTGGAGATCGCA
AATTACATATGTCTGCGTGACGGCGGGGAGCTCGCTGAGGCTTGACATGATTGGTGCGTATGTTTGTATGAAGCTACAGGACT
GATTTGGCGGGCTATGAGGGCGGGGAAGCTCTGGAAGGGCCGCGATGGGGCGCGGGCGTCCAGAAGGCGCCATACGGCCCG
CTGGCGGCACCCATCCGGTATAAAAGCCCGCGACCCCGAACGGTGACCTCCACTTTCAGCGACAAACGAGCACTTATACATAC
GCGACTATTCTGCCGTATACATAACCACTCAGCTAGCGATCCCGGGCGCGCCAGAAGGAGCGCAGCCAAACCAGGATGATGT
TTGATGGGGTATTTGAGCACTTGCAACCCCTATCCGGAAGCCCCCTGGCCCCACAAAGGCTAGGCGCCAATGCAAGCAGTTTCG
ATGCAGCCCCCTGGAGCGGTGCCCTCCTGATAAACCGGCCAGGGGGCTATGTTCTTTACTTTTTTACAAGAGAAGTCACTCAA
CATCTTAAaatg

$P_{\beta SAP(i)}$

HSP70A Promoter, β TUB2 Promoter, β TUB2 5' UTR, RBCS2i1, engineered ATANTT motifs
are underlined

ggagGCTGAGGCTTGACATGATTGGTGCGTATGTTTGTATGAAGCTACAGGACTGATTTGGCGGGCTATGAGGGCGGGGGAAG
CTCTGGAAGGGCCGCGATGGGGCGCGGGCGTCCAGAAGGCGCCATACGGCCCGCTGGCGGCACCCATCCGGTATAAAAGCCC
GCGACCCCGAACGGTGACCTCCACTTTCAGCGACAAACGAGCACTTATACATACGCGACTATTCTGCCGCTATACATAACCAC
TCAGCTAGCTTAAGATCCCATCACCGGTCTGGCACTTCTTTCGCTATGACACTTCAGCAAAAGGTAGGGCGGGCTGCGAGA
CGGCTTCCCGGGCGCTGCATGCAACACCGATGATACTTATGCTTCGACCCCCCGAAGCTCCTTCGGGGCTGCATGGGCGCTCCG
ATGCCGCTCCAGGGCGAGCGCTGTTTAAATAGCCAGGCCCGGACTGCAAGACATTATAGCGAGCTACCAAGCCATACTTC
AAACACCTAGATCACTACCACTTCTACACAGGCCACTCGAGCTTGTGGTGAGTCGACGAGCAAGCCCGGCGGATCAGGCAGCG
TGCTTGCAAGATTTGACTTGCAACGCCCGCATTGTGTGACGAAGGCTTTGGCTCCTCTGTGCTGTCTCAAGCAGCATCTAA
CCCTGCGTGCCTGTTCCATTTGCAGATCGCACTCCGCTAAGGGGGCGCCTCTTCCTCTTCGTTTCAGTCACAACCCGCAaatg