

Impact of Different Promoters on Episomal Vectors harboring Characteristic Motifs of Matrix Attachment Regions

Running title: Promoters and episomal vectors

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Fig. S1 Sequence of primers used in this study

CMV promoter sequence (589bp)

TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTT
CCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCGCCCAACGACCCCCG
CCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGACTTTCCA
TTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGCAGTACATCAAGT
GTATCATATGCCAAGTACGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTG
GCATTATGCCCAGTACATGACCTTATGGGACTTTCTACTTGGCAGTACATCTACGT
ATTAGTCATCGCTATTACCATGGTGATGCGGTTTTTGGCAGTACATCAATGGGCGTGG
ATAGCGGTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAG
TTTGTTTTGGCACCAAAATCAACGGGACTTTCCAAAATGTCGTAACAACTCCGCCCC
ATTGACGCAAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTGG
TTTAGTGAACCGTCAGATC

Ubc promoter sequence (1168 bp)

GGCCTCCGCGCCGGGTTTTGGCGCCTCCCGCGGGCGCCCCCTCCTCACGGCGAGCG
CTGCCACGTCAGACGAAGGGCGCAGGAGCGTCCTGATCCTTCCGCCCCGGACGCTCAG
GACAGCGGCCCGCTGCTCATAAGACTCGGCCTTAGAACCCCAGTATCAGCAGAAGGA
CATTTTAGGACGGGACTTGGGTGACTCTAGGGCACTGGTTTTCTTTCCAGAGAGCGG
AACAGGCGAGGAAAAGTAGTCCCTTCTCGGCGATTCTGCGGAGGGATCTCCGTGGGG
CGGTGAACGCCGATGATTATATAAGGACGCGCCGGGTGTGGCACAGCTAGTTCCGTC
GCAGCCGGGATTTGGGTCGCGGTTCTTGTTTGTGGATCGCTGTGATCGTCACTTGGT
GAGTAGCGGGCTGCTGGGCTGGCCGGGGCTTTCGTGGCCGCCGGGCCGCTCGGTGGG
ACGGAAGCGTGTGGAGAGACGCCAAGGGCTGTAGTCTGGGTCCGCGAGCAAGGTTG
CCCTGAACTGGGGGTGGGGGGAGCGCAGCAAAATGGCGGCTGTTCCCGAGTCTTGA
ATGGAAGACGCTTGTGAGGCGGGCTGTGAGGTCGTTGAAACAAGGTGGGGGGCATGG
TGGGCGGCAAGAACCCAAGGTCTTGAGGCCTTCGCTAATGCGGGAAAGCTCTTATTC
GGGTGAGATGGGCTGGGGCACCATCTGGGGACCCTGACGTGAAGTTTGTCACTGACT
GGAGAACTCGGTTTGTCTGTCTGTTGCGGGGGCGGCAGTTATGCGGTGCCGTTGGGCA
GTGCACCCGTACCTTTGGGAGCGCGCGCCCTCGTCGTGTCGTGACGTCACCCGTTCT
GTTGGCTTATAATGCAGGGTGGGGCCACCTGCCGGTAGGTGTGCGGTAGGCTTTTCT

CCGTCGCAGGACGCAGGGTTCGGGCCTAGGGTAGGCTCTCCTGAATCGACAGGCGCC
GGACCTCTGGTGAGGGGAGGGATAAGTGAGGCGTCAGTTTCTTTGGTCGGTTTTATG
TACCTATCTTCTTAAGTAGCTGAAGCTCCGGTTTTTGAACATGCGCTCGGGGTGGC
GAGTGTGTTTTGTGAAGTTTTTTAGGCACCTTTTGAAATGTAATCATTGGGTCAAT
ATGTAATTTTCAGTGTTAGACTAGTAAA

RSV promoter sequence (229 bp)

AATGTAGTCTTATGCAATACTCTTGTAGTCTTGCAACATGGTAACGATGAGTTAGCA
ACATGCCTTACAAGGAGAGAAAAAGCACCGTGCGATGCCGATTGGTGGAAGTAAGGTG
GTACGATCGTGCCTTATTAGGAAGGCAACAGACGGGTCTGACATGGATTGGACGAAC
CACTGAATTGCCGCATTGCAGAGATATTGTATTTAAGTGCCTAGCTCGATACATAAA
C

SV40 promoter sequence (351bp)

GGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAAAGCATGCATCTCA
ATTAGTCAGCAACCAGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGC
AAAGCATGCATCTCAATTAGTCAGCAACCATAGTCCCGCCCCCTAACTCCGCCCATCC
CGCCCCCTAACTCCGCCCAGTTCCGCCCATTTCTCCGCCCCATGGCTGACTAATTTTTT
TTATTTATGCAGAGGCCGAGGCCGCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAG
GAGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAGATCGATCAAGAGACAGGATGAGGA
TCGTTTCGC

PGK promoter sequence (555bp)

TTGGGGTTGCGCCTTTTCCAAGGCAGCCCTGGGTTTGCGCAGGGACGCGGCTGCTCT
GGGCGTGGTTCCGGGAAACGCAGCGGCGCCGACCCTGGGTCTCGCACATTCTTCACG
TCCGTTTCGCAGCGTCACCCGGATCTTCGCCGCTACCCTTGTGGGCCCCCGGCGACG
CTTCCTGCTCCGCCCCCTAAGTCGGGAAGGTTCCCTTGCGGTTTCGCGGCGTGCCGGACG
TGACAAACGGAAGCCGCACGTCTCACTAGTACCCTCGCAGACGGACAGCGCCAGGGA
GCAATGGCAGCGCGCCGACCGCGATGGGCTGTGGCCAATAGCGGCTGCTCAGCAGGG
CGCGCCGAGAGCAGCGGCCGGAAGGGGCGGTGCGGGAGGCGGGGTGTGGGGCGGTA
GTGTGGGCCCTGTTCCCTGCCCCGCGCGGTGTTCCGCATTCTGCAAGCCTCCGGAGCGC
ACGTCGGCAGTCGGCTCCCTCGTTGACCGAATCACCGACCTCTCTCCCCAGGGGGAT
CCACCGGAGCTTACCATGACCGAGTACAAGCCACGGTGCGC

β-globin promoter sequence (366bp)

GCTTTGCTTCTCAATTTCTTATTTGCATAATGAGAAAAAAGGAAAATTAATTTTAA
CACCAATTCAGTAGTTGATTGAGCAAATGCGTTGCCAAAAAGGATGCTTTAGAGACA
GTGTTCTCTGCACAGATAAGGACAAACATTATTCAGAGGGAGTACCCAGAGCTGAGA
CTCCTAAGCCAGTGAGTGGCACAGCATTCTAGGGAGAAATATGCTTGTCATCACCGA
AGCCTGATTCCGTAGAGCCACACCTTGGTAAGGGCCAATCTGCTCACACAGGATAGA
GAGGGCAGGAGCCAGGGCAGAGCATATAAGGTGAGGTAGGATCAGTTGCTCCTCACA
TTTGCTTCTGACATAGTTGTGTTG

Fig. S2 CG dinucleotides content in the CMV and SV40 promoter

CMV promoter sequence (589bp)

TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTT
C CGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCGCCCAACGACCCCG
CCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGACTTTCCA
TTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGCAGTACATCAAGT
GTATCATATGCCAAGTACGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTG
GCATTATGCCCAGTACATGACCTTATGGGACTTTCCCTACTTGGCAGTACATCTACGT
ATTAGTCATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACATCAATGGGCGTGG
ATAGCGGTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAG
TTTGTTTTGGCACCAAAATCAACGGGACTTTCCAAAATGTCTAACAACCTCGCCCC
ATTGACGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTGG
TTTAGTGAACCGTCAGATC

SV40 promoter sequence (351bp)

GGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCATCTCA
ATTAGTCAGCAACCAGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGC

AAAGCATGCATCTCAATTAGTCAGCAACCATAGTCCCGCCCCCTAACTCCGCCCATCC
CGCCCCCTAACTCCGCCCCAGTTCGCCCCATTCTCCGCCCCATGGCTGACTAATTTTTT
TTATTTATGCAGAGGCAGAGGCCGCCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAG
GAGGCTTTTTTTGGAGGCCTAGGCTTTTGCAAAGATCGATCAAGAGACAGGATGAGGA
TCGTTTCGC