

SUPPLEMENTARY MATERIAL

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ATG CAG ACC CCC AAA GAG ACC CTG TCC GAG AGA CTG TCA TGC GTC CAG GAT
      A G G A      T G A CGT TTA AGT      G      C
AAG ATC ATC GAC CAC TAC GAG AAC GAC TCA AAA GAC ATC GAC AGT CAG ATT
      A      A      T A T      AGT      A      C A A
CAG TAC TGG CAG CTG ATC CGG TGG GAG AAC GCA ATT TTC TTT GCC GCT AGA
      T      A A T T      A T      A      A A G
GAA CAC GGC ATC CAG ACC CTG AAC CAT CAG GTG GTC CCC GCT TAC AAT ATC
      T      A      A TTA      C      G A C T C T
TCA AAG AGC AAA GCC CAC AAG GCT ATT GAG CTG CAG ATG GCA CTG CAG GGA
      A T      A T A      A      A      C T
CTG GCA CAG AGC CGA TAT AAA ACA GAG GAC TGG ACT CTG CAG GAT ACC TGC
      T      A T      C      C      T      A      A C A
GAG GAA CTG TGG AAT ACA GAA CCT ACT CAT TGT TTC AAG AAA GGC GGG CAG
      A      C C T A      T C A
ACC GTG CAG GTC TAC TTT GAC GGG AAC AAG GAT AAT TGC ATG ACA TAT GTG
      A A A A T      T C      A C      T      C A
GCC TGG GAT TCA GTC TAC TAT ATG ACA GAC GCT GGA ACT TGG GAT AAG ACT
      A C      G T      T T A      A      C A C
GCA ACC TGC GTG AGC CAC AGG GGC CTG TAC TAT GTG AAA GAG GGG TAC AAC
      T      T A T      A      T      A G A
ACA TTC TAT ATC GAG TTC AAG AGC GAG TGC GAA AAA TAT GGG AAT ACA GGA
      G T      A A T A T A      A      C      T
ACT TGG GAG GTG CAC TTC GGC AAC AAT GTC ATT GAC TGC AAC GAT AGC ATG
      G      A A T T G T      A      T T T C
TGC TCC ACC TCT GAC GAT ACA GTG TCC GCC ACT CAG CTG GTC AAG CAG CTG
      C G A      T      T T A      A
CAG CAT ACA CCC AGT CCT TAC AGC TCC ACC GTG AGC GTC GGA ACC GCC AAA
      C C      G T      G C      A G
ACA TAT GGC CAG ACC TCC GCA GCA ACA CGA CCA GGA CAC TGC GGA CTG GCT
      C C      G G T T      T      T      C G
GAA AAG CAG CAT TGT GGC CCA GTG AAT CCC CTG CTG GGG GCT GCA ACC CCT
      G      A T C C A T C T A T A
ACA GGA AAC AAT AAG CGG AGA CTG CTG TGC TCT GGA AAC ACC ACA CCA ATC
      C      A      A C C T AGT T      T G T A
ATT CAC CTG AAG GGC GAC CGG AAC AGC CTG AAG TGT CTG AGG TAC CGC CTG
      A T TTA A T      AGA      T TTA A      TTA C      AGA TT
CGA AAG CAC AGT GAC CAT TAT CGC GAT ATC TCT AGT ACT TGG CAC TGG ACC
      A T C      C      AGA      A A TCC C      T A
GGA GCC GGC AAC GAG AAG ACC GGC ATT CTG ACT GTG ACC TAC CAT TCC GAA
      T A      T A A A C A      A A      AGT
ACT CAG CGG ACC AAA TTT CTG AAC ACT GTG GCT ATC CCT GAC TCC GTG CAG
      A A AGA A      TTA T      T A T A T AGT A A
ATC CTG GTC GGC TAT ATG ACT ATG TGA
      A TTG G A C      A      A

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Supplementary Figure 1. Nucleotide sequence of HPV-18 E2 used in this study. The sequence was modified to optimize translation of E2. Blue letters correspond to wild type nucleotides. Red letters correspond to optimized nucleotides. 51 nucleotides per line.