

**A**

pMpGE011\_ARF1\_1 using pMpGE\_En01 (28/32)

H P A Q E L V A R D L H D Q E W H F R  
 5' -CATCCTGCCCAGGAGCTTGTTCGCAA**GAGACCTTCATGATCA**--**GGAGTGG**CACTTCCGG-3' (WT)  
 5' -CATCCTGCCCAGGAGCTTGTTCGCAAGAGACCTTCAT-----GAGTGGCACTTCCGG-3' x2  
 5' -CATCCTGCCCAGGAGCTTGTTCGCAAGAGACCTTCATGAT----GAGTGGCACTTCCGG-3' x2  
 5' -CATCCTGCCCAGGAGCTTGTTCGCAAGAGACCTTCATGATCA**GT**GGAGTGGCACTTCCGG-3'  
 5' -CATCCTGCCCAGGAGCTTGTTCGCAAGAGACCTTCATGATC-----TGGCACTTCCGG-3'  
 5' -CATCCTGCCCAGGAGCTTGTTCGCAAGTGACCTTCATGATC**G**---TGAGTGGCACTTCCGG-3'  
 5' -CATCCTGCCCAGGAGCTTGTTCGCAAGAGACCTTCATGAT**GA**--GGAGTGGCACTTCCGG-3' x2  
 5' -CATCCTGCCCAGGAGCTTGTTCGCAAGAGACCTTCATGATCA---TGAGTGGCACTTCCGG-3' x8  
 5' -CATCCTGCCCAGGAGCTTGTTCGCAAGAGACCTTCATGATCA---GAGTGGCACTTCCGG-3'  
 5' -CATCCTGCCCAGGAGCTTGTTCGCAAGAGACCTTCATGATC**T**---TGAGTGGCACTTCCGG-3'  
 5' -CATCCTGCCCAGGAGCTTGTTCGCAAGAGACCTTCATGAT-----CACTTCCGG-3'

Indels larger than 20 bp x 2

Mosaic x 6

**B**

pMpGE010\_NOP1\_1 using pMpGE\_En02 (12/16)

E L S K S D S L C E R I G S T N G A  
 5' -GAGCTCTCGAAATCC**GATAGTCTTTGTGAGAG**-----**AATAGG**CTCAACAAACGGAGCTA-3' (WT)  
 5' -GAGCTCTCGAAATCCGATAGTCTTTGTGAGAG-----CTAGGCTCAACAAACGGAGCTA-3'  
 5' -GAGCTCTCGAAATCCGATAGTCTTTGTGAGAG**GCTCAAC**AATAGGCTCAACAAACGGAGCTA-3'  
 5' -GAGCTCTCGAAATCCGATAGTCTTTGTGA-----TAGGCTCAACAAACGGAGCTA-3'  
 5' -GAGCTCTCGAAATCCGATAGTCTTTGT**TA**-----TAGGCTCAACAAACGGAGCTA-3'  
 5' -GAGCTCTCGAAATCCGATAGTCTTTGTGA-----GAGGCTCAACAAACGGAGCTA-3'  
 5' -GAGCTCTCGAAATCCGATAGTCTTTGTGA-----GAGCTA-3'  
 5' -GAGCTCTCGAAATCCGATAGTCTTTGTGAGAG-----AATAGGCTCAACAAACGGAGCTA-3' x4

Indels larger than 20 bp x 4

Mosaic x 2