

Production of virus-like particles of FMDV by 3C Protease cleaving precursor polyprotein P1 *in vitro*

Applied Microbiology and Biotechnology

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Optimized 3C gene sequence: 639 bp

TCTGGTGCTCCACCAACCGATTTGCAAAAGATGGTTATGGGTAACACCAAGCCAGTTGAAT
TGATCTTGACGGTAAGACCGTTGCTATTTGTTGTGCTACCGGCGTTTTTCGGTACCGCTTAC
TTGGTTCCAAGACACTTGTTCGCTGAAAAGTACGATAAGATCATGTTGGATGGTAGAACCAT
GACCGACTCCGATTACAGAGTTTTTCGAATTCGAAATTAAGGTTAAGGGTCAAGACATGTTG
TCCGACGCTGCTTTGATGGTTTTGCACAGAGGTAACAGAGTTAGAGATATCACCAAGCACT
TCAGAGACACCGCTAGAATGAAGAAGGGTACCCCAGTTGTTCGGTGTTATTAACAACGCTGA
TGTTGGTAGATTGATTTTCTCCGGTGAAGCTTTGACCTACAAGGACATCGTTGTTTGTATGG
ACGGTGATACCATGCCAGGTTTGTTCGCTTACAAGGCTGCTACTAAGGCTGGTTACTGTGGT
GGTGCTGTTTTGGCTAAGGATGGTGCTGACACTTTCATTGTTGGTACTCATTCTGCTGGTGG
TAACGGTGTTGGTTACTGTTCTTGTGTTTCTAGATCTATGTTGCAAAAGATGAAGGCTCACA
TTGACCCAGAACCACATCATGAA

Optimized P1 gene sequence: 2202 bp

GGTGCTGGTCAATCTTCTCCAGCTACCGGCTCTCAAAACCAATCTGGTAACACCGGCTCTAT
CATCAACAATACTACATGCAACAATACCAAACTCTATGGACACCCAATTGGGTGATAACG
CTATCTCCGGTGGTTCTAACGAAGGTTCCACCGACACCACTTCTACCCACACCACCAACAC
CCAAAACAACGACTGGTTCTCCAAGTTGGCTTCTTCTGCTTTCTCTGGTTTGTTCGGTGCTT
TGTTGGCTGACAAGAAGACCGAAGAAACCACCTTGTTGGAAGACAGAATCTTGACCACCA
GAAACGGTCACACCACCTCCACCACCAATCTTCTGTTGGTATCACCCACGGTTACGCTACT
GCTGAAGACTTCGTTAACGGTCCAAACACCTCTGGTTTGGAAACCAGAGTTATCCAAGCTG
AAAGATTCTTCAAGACCCACTTGTTTCGACTGGGTTACCTCCGACCCATTCCGGTAGATACTAC
TTGTTGGAATTGCCAACCGACCACAAGGGTGTTTACGGTTCCTTGACCGACTCTTACGCTTA
CATGAGAAACGGTTGGGACGTTGAAGTTACCGCTGTTGGTAACCAATTCAACGGTGGTTGT
TTGTTGGTTGCTATGGTCCCAGAATTGTGTTCTATCGAACAAAGAGAATTGTTCCAATTGAC
CTTGTTCCACATCAATTCATCAACCCAAGAACTAACATGACCGCTCATATTAAGGTTCCATT
CGTTGGTGTTAACAGATACGATCAATACAAGGTTTACAAGCCATGGACCTTGGTTGTTATGG
TTGTTGCTCCATTGACCGTCAACACCGAAGGTGCTCCACAAATCAAGGTTTACGCTAACATT
GCTCCAACCAACGTTACGTTGCTGGTGAATTCCCATCTAAGGAAGGTATCTTCCCAGTTGC
TTGTTCTGACGGTTACGGTGGTTTGGTTACCACCGACCCAAAGACCGCTGACCCAGTTTAC
GGTAAGGTTTTTCAACCCACCAAGAAACATGTTGCCAGGTAGATTACCAACTTGTTGGATG
TTGCTGAAGCTTGTTCCAACCTTCTTGCACTTCGACGGTGACGTTCCATACGTTACCACTAAG
ACCGACTCCGACAGAGTTTTGGCTCAATTCGATTTGTCTTTGGCTGCTAAGCACATGTCTAA
CACCTTCTTGCTGGTTTGGCTCAATACTACACCCAATACTCCGGTACCGTTAACTTGCATT
CATGTTCACTGGTCCAACCGACGCTAAGGCTAGATACATGATCGCTTACGCTCCACCAGGTA
TGGAACCAACAAAGACCCCAAGCTGCTGCTCACTGTATCCATGCTGAATGGGACACCGG
CTTGAACCTCAAGTTCACCTTCTCTATCCCATACTTGTCTGCTGCTGACTACGCTTACACCGC
TTCTGACGCTGCTGAAACCACCAACGTCCAAGGTTGGGTTTGTGTTTCCAAATTACCCAC
GGTAAGGCTGAAGGTGACGCTTTGGTTGTTTTGGCTTCTGCTGGTAAGGACTTCGAATTGA
GATTGCCAGTTGACGCTAGACAACAACTACTTCTACTGGTGAATCCGCTGACCCAGTCAC
CACCACCGTTGAAAACCTACGGTGGTGAAACCCAAGTTCAAAGAAGACACCACACCGACGT
CTCCTTCATCTTGACAGATTCGTTAAGGTCACCCAAAGGACTCTATCAACGTTTTGGACT
TGATGCAAACCCCATCTCATACCTTGTTGGTGCTTTGTTGAGAACCGCTACCTACTACTTC
GCTGACTTGGAAGTTGCTGTTAAGCACAAGGGTGACTTGACCTGGGTTCCAAACGGTGCTC
CAGTTGCTGCTTTGGACAACACCACTAACCAACCGCTTACCACAAGGCTCCATTGACTAG
ATTGGCTTTGCCATACACCGCTCCACATAGAGTTTTGGCTACCGTCTACAACGGTGAATGTA
AGTACGCTGAAGGTTCTTTGCCAAACGTTAGAGGTGACTTGCAAGTTTTGGCTCAAAAGGC
TGCTAGACCATTGCCAACCTCCTTCAACTACGGTGCTATTAAGGCTACTAGAGTTATCGAATT
GTTGTACAGAATGAAGAGAGCTGAAACCTACTGTCCAAGACCATTGTTGGCTGTTTCATCCA
TCTGCTGCTAGACACAAGCAAAAGATTGTTGCTCCAGTTAAGCAA