



PvuI (7)
SgfI (6) 1 GGATCTGCATCGCTCCGGTGCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTATGTCGTGTACTGGCTCCGCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCTCTGAAGTGCCTCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCCCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)
AgeI (552) 501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATGGTAGCACGCAACCAGGTGGCAGCCGACAATGCGAT

1 M V A R N Q V A A D N A I

PshAI (620) 601 CTCCCCGGCAGCAGACGCCCGACGGCGTTCAGAGCCCTCCTCGTCTTCTGTCCTCGCCAGCGGCCCGTGGCTCCCGGCCCTGCCGGCGGTC

13 S P A A E P R R R S E P S S S S S S S P A A P V R P R P C P A V

BbsI (648)
BssHII (776)
XcmI (773) 701 CCAGCCCCAGCCCTGGCGACTACTTCCGCACCTTCCGCTCCCACTCCGATTACCGGCGCATCACGCGGACCAGCGCTCTGGACGCCTGCGGCT

47 P A P A P G D T H F R T F R S H S D Y R R I T R T S A L L D A C G

SandI (807) 801 TCTATTGGGACCCCTGAGCGTGCACGGGGCGCACGAGCGGCTGCGTGCCGAGCCCGTGGGCACCTTCTTGGTGCGGACAGTCGCCAACGGAAGTCTT

80 F Y W G P L S V H G A H E R L R A E P V G T F L V R D S R Q R N C F

XmnI (891)
NgoMIV (958) 901 CTTGCGCTCAGCGTGAAGATGGCTTCCGGCCCCACGAGCATCCGCGTGCCTTCCAGGCCGGCGCTTCCACTTGGACGGCAGCCGCGAGACCTTCGAC

113 F A L S V K M A S G P T S I R V H F Q A G R F H L D G S R E T F D

PstI (1084)
DraIII (1021) 1001 TGCCTTTTCGAGCTGCTGGAGCACTAGTGGCGGCCCGCCGCGCATGTTGGGGCCCGCTGCGCCAGCGCCGCTGCGCCGCGCTGCAGGAGCTGTGTC

147 C L F E L L E H Y V A A P R R M L G A P L R Q R R V R P L Q E L C

NotI (1077)
NruI (1125) 1101 GCCAGCGCATCGTGGCCCGTGGTGCAGAGAACCTGGCGGCATCCCTTAAACCCGGTACTCCGTGACTACCTGAGTTCTTCCCTTCCAGATCTG

180 R Q R I V A A V G R E N L A R I P L N P V L R D Y L S S F P F Q I •

BssHII (1138) 1201 ACCGGCTGCCGCTGTGCCGAGCATTAAGTGGGGCGCCTTATGCTAGCTGGCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAAGTACA

213

NheI (1243)
MscI (1249) 1301 ATGCAGTAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAAGTAAACAACAATTGCA

HpaI (1381) 1401 TTCATTTATGTTTCAGTTTCAGGGGAGGTGTGGAGGTTTTTAAAGCAAGTAAACCTTACAAATGTGGTATGGAATTTAAATAACAGCATAGCA

EcoRI (1477) 1501 AAACCTTAACTCCAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTT

SapI (1659) 1601 CAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTCCCAAGGTTTGAAGTACTGCTTCTTCTTATGTTTTAAATGCACTGACCTCCAC

SspI (1716) 1701 ATTCCCTTTTATGTAATAATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTC

1801 ATAATATCCCCAGTTTAGTAGTTGACTTAGGAACAAGGAACCTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGT

141 • N R T Y

SacI (1991) 1901 ACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCT

136 K L P I L E E I T T K V L K G N M E I L V F C D P A Y D S I L E R

BstXI (2020) 2001 GCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTG

103 C M G C P S V V R I S R D V E D S Y P H R V A V I T D F D K Q G N

StuI (2155) 2101 CTCACAGCAGACCAATGGCAATGGCTTCCAGCACAGACAGTACCCTGCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCC

69 S V A S G I A I A E A C V T V R G I Y A E I H V A S I I E G T K T R

2201 TGATGGCCGCCCGACATGGTGTGTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAA
36 I A A G V H H K N D E Y L M T I K E T A V E V L E L D Q Q S I N F

BbsI (2301)

AseI (2363)

2301 GGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCT
3 T K M

SacI (2420)

2401 IATCTGACGGTTCACAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTT

SpeI (2518)

2501 GGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCAGCCCAT

SnaBI (2646)

2601 TGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAGGTCATGTACTGGGCATA

NdeI (2751)

2701 ATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATAC

2801 TCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGGTCTGTTGGGCGGTGAGCCAG

PacI (2937)

PstI (2930)

SdaI (2929)

BspLU11I (2947)

2901 GCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGCCGCGTTG

3001 CTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGG

3101 CGTTTCCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTCTCCCTTCGGAAGCGTGGCGTTTC

3201 TCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCCGACCGCTGCGCCTTA

3301 TCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCG

3401 GTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAG

3501 AGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAA

PacI (3677) SwaI (3686) NotI (3696)

3601 GATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGG

3701 CCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAAC

3801 AAAGTAGCAAAATAGGCTGTCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA