



PvuI (7)
SgfI (6) 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGCGCAATTGAACGGGTGCCTA

MfeI (82)
101 GAGAAAGTGGCGCGGGTAAACTGGAAAAGTGTGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCGCTACCTGAGGCC

PvuII (239) 301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCCTGTGGTGCCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

Bsu36I (291)
NgoMIV (441) 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)
AgeI (552) 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATGGGAAACAAGTGTACAACGTGGTGGTCATTGTGCT

NcoI (560) 1 M G N N C Y N V V V I V L

BstAPI (692)
601 GCTGCTAGTGGGCTGTGAGAAGTGGGAGCCGTGCAGAACTCCTGTGATAACTGTCAGCCTGGTACTTTCTGCAGAAAATACAATCCAGTCTGCAAGAGC

13 L L V G C E K V G A V Q N S C D N C Q P G T F C R K Y N P V C K S
701 TGCCCTCAAGTACCTTCTCCAGCATAGGTGGACAGCCGAAGTGAACATCTGCAGAGTGTGTGCAGGCTATTTCAAGTTCAGAAGTTTTGCTCCTCTA

47 C P P S T F S S I G G Q P N C N I C R V C A G Y F R F K K F C S S

MscI (882)
801 CCCACAACGCGGAGTGTGAGTGCATTGAAGATTCCATTGCTTGGGGCCACAGTGCACCAGATGTGAAAAGGACTGCAGGCCTGGCCAGGAGCTAACGAA

80 T H N A E C E C I E G F H C L G P Q C T R C E K D C R P G Q E L T K

ApaLI (852) 901 GCAGGTTGCAAAACCTGTAGCTTGGGAACATTTAATGACCAGAACGGTACTGGCGTCTGCGACCCTGGACGAACTGCTCTAGACGGAAGTCTGTG

XcmI (939) 113 Q G C K T C S L G T F N D Q N G T G V C R P W T N C S L D G R S V

SalI (959) 1001 CTTAAGACCGGGACCACGGAGAAGGACGTGGTGTGGACCCCTGTGGTGTGAGCTTCTCTCCAGTACCACCATTTCTGTGACTCCAGAGGGAGGACCAG

XbaI (981) 147 L K T G T T E K D V V C G P P V V S F S P S T T I S V T P E G G P

BstAPI (1104) 1101 GAGGGCACTCCTTGCAGGTCCTTACCTTGTCTGGCGCTGACATCGGCTTTGCTGTGGCCCTGATCTTCATTACTCTCCTGTTCTCTGTGCTCAAATG

EcoO109I (1115) 180 G G H S L Q V L T L F L A L T S A L L L A L I F I T L L F S V L K W

XmnI (1206) 1201 GATCAGGAAAAAATCCCCACATATTCAGCAACCATTTAAGAAGACCCTGGAGCAGCTCAAGAGGAAGATGCTTGTAGTGCAGTCCACAGGAA

BbsI (1242) 213 I R K K F P H I F K Q P F K K T T G A A Q E E D A C S C R C P Q E

MscI (1342)
1301 GAAGAAGGAGGAGGAGGAGGCTATGAGCTGTGATGTCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAGTGAATGCAGT

NheI (1336) 247 E E G G G G Y E L •

HpaI (1474) 1401 GAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCAATT

MfeI (1485)
1501 TATGTTTCAGGTTTCAAGGAGGTTGGGAGGTTTTTAAAGCAAGTAAAACCTTACAAATGTGGTATGGAATTCATAAATACAGCATAGCAAACCTTT

EcoRI (1570)
1601 AACCTCCAAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTC

SapI (1752) 1701 ACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGTTTGAAGTACTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCT

SspI (1809) 1801 TTTTAGTAAAAATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATAT

Swal (1823) 1901 CCCCCAGTTTAGTGTGACTTAGGGAACAAAGAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAG

EcoO109I (1884) 141 • N R T Y K L

SacI (2084) 2001 GGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATG

134 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 C M

BstXI (2113) 2101 CCACAGGGGTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAG

100 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 S V A

StuI (2248) 2201 CAGACCAATGGCAATGGCTTCAACACAGACAGTACCTGCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGC

67 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 I A

BbsI (2394)
XmnI (2390)
2301 CGCCCCGACATGGTGCTTGTTCCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTC
34 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 T K
AseI (2456)
2401 ATGGTGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGA
0 M
SacI (2513)
2501 CGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAAGT
SpeI (2611)
2601 CCCGTTGATTTACTAGTCAAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTA
SnaBI (2739)
2701 CTGCCAAAACCGCATCATCATGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAAGTCATGTACTGGGCATAATGCCAG
NdeI (2844)
2801 GCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCC
2901 ATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCTGTTGGGCGGTACGCCAGGCGGGCC
PacI (3030)
SdaI (3022) BspLU11I (3040)
3001 ATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGT
3101 TTTCCATAGGCTCCGCCCCCTGACGAGCATCAGAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCC
3201 CCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGC
ApaLI (3354)
3301 TCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCCAGCCGCTGCGCCTTATCCGGTA
3401 ACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTAC
3501 AGAGTTCTTGAAGTGGTGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGT
3601 AGCTCTTGATCCGGCAAACAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTT
EagI (3790)
PacI (3770) SwaI (3779) NotI (3789)
3701 TGATCTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAATCAGCGGCCCAAT
3801 AAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAG
3901 CAAAATAGGCTGTCCCAAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA