



PvuI (7)
SgfI (6)
MfeI (82) **EcoNI (96)**

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
Bsu36I (291)

201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

EcoNI (287)

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

KasI (535)
SphI (560)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCAGCATGCAGGCATTTCTGAAAGGCACATCTGTCAGTGCCAA
 601 AGCACAACCTGACCAAGGACCGGGGACACCTGCCACTGCAGGAAGCAGTGGAGAAACCAAGAAAGTCAAACAGTTTCTGGTGGAAAAATACCGTCCA
 13▶ A Q L T K D R G T P A T A G S S G E T K K V K P V P W V E K Y R P
 701 AAGTGTGGATGAAGTGGCTTTCCAGGACGAAGTGGTTGCAGTGTGAGAAAGTCTTGAAGGAGCTGACCTTCTAATCTTGTTCATGGGCCAC
 47▶ K C V D E V A F Q D E V V A V L R K S L E G A D L P N L L F Y G P

NsiI (887)

801 CTGGAAGTGGCAAAACATCCACCATTTTGGCAGCAGCTAGAGAGCTCTTTGGCCTGAACTCTTTCGATTAAGAGTCCTTGAGTTAAATGCATCTGATGA
 80▶ P G T G K T S T I L A A A R E L F G P E L F R L R V L E L N A S D E

HpaI (945)

901 ACGTGAATACAAGTAGTCCGAGAGAAAGTAAAAATTTTGTCTAGTTAACTGTATCAGGAAGTCTTTCAGATGGGAAGCCATGCTCCTCCTTAAGATT
 113▶ R G I Q V V R E K V K N F A Q L T V S G S R S D G K P C P P F K I

NotI (1058)

1001 GTAATTCTGGATGAAGCAGATTGATGACTTCAGTGTCTCAGGAGCTTTAAGGCGTACCATGGAAAAAGAATCAAAAACAACAGATTCTGCCTCATCT
 147▶ V I L D E A D S M T S A A Q A A L R R T M E K E S K T T R F C L I

XbaI (1135)

1101 GAACTATGTCAGTCAATAATTGAACCCCTCATTCTAGATGTTCAAATTCGCTTCAAGCCTCTGTGAGATAAGATTCAACAGGAGCGATTACTGGA
 180▶ C N Y V S R I I E P L T S R C S K F R F K P L S D K I Q Q E R L L D

EcoRV (1257)

1201 TATTGCTGAGAAGAAAAATGCAAAATTTGGCAATGAGGAAATAGCGTATCTTGTAAAGATATCAGAAGGAGATTACGGAAGCCATCACATTTCTTCAG
 213▶ I A E K E N V K I G N E E I A Y L V K I S E G D L R K A I T F L Q

SspI (1389)

1301 AGTGCCACTCGACTAACAGGTGGAAAGGAGTCTCTGAAGATGTGATCACAGACATTGCTGGGTAATACCAGCTGCAACATTGATGGAAATTTCACTG
 247▶ S A T R L T G G K E V S E D V I T D I A G V I P A A T I D G I F T

BspHI (1491)

1401 CATGTCACAGTGGCTTTTTGACAACTAGAAGCTGTGGTAAAGAACCTCATAGATGAAGGACATGCAGCTACTCAGCTTGTCAATCAACTTCATGATGC
 280▶ A C H S G S F D K L E A V V K N L I D E G H A A T Q L V N Q L H D A

BstAPI (1579)

1501 AATTATAGAAAATGAAAATCTGTCTGATAAACACAAGTCCATTATCACAGAGAACTTGTGTAAGTAGACAAGTCTTGGCAGATGGTGCAGATGAACAC
 313▶ I I E N E N L S D K H K S I I T E K L A E V D K C L A D G A D E H

MscI (1686)

1601 CTGCAGTTGATGAGCCTTTGTGCAACTGTGATGCAGCAGCTAACTCAGAACTGTTAGAGGCTTCACTCTCCCTTTTGTGCTAGCTGGCCAGACATGAT
 347▶ L Q L M S L C A T V M Q Q L T Q N C •

NheI (1680)

1701 AAGATACATTGATGAGTTTGACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATT

HpaI (1818)
MfeI (1829)

1801 ATAAGCTGCAATAACAAGTTAAACAACAACAATTGCATTCAATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTAAAGCAAGTAAACCTCT

EcoRI (1914)

1901 ACAAATGGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAG

SapI (2096)

2001 GCATCAGGGGCTGTTGCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCAAGGTTTGAAGTGCATGCTC

SspI (2153)
SwaI (2167)

2101 TTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAATATTCAGAATAATTTAAATACATCATTGCAATGAAAATAAATGT

EcoO109I (2228)

2201 TTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCAATATCCCCAGTTTGTAGTGTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATGGAC

2301 AGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTTCATCTCAATGAGCA
 141▶ • N R T Y K L P I L E E I T T K V L K G N M E I L V

2401 CAAAGCAGTCAGGAGCATAGTCAAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGTGCCT
 115▶ F C D P A Y D S I L E R C M G C P S V V R I S R D V E D S Y P H R

StuI (2592)

2501 GACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTTCAGCACAGACAGTACCCTGCCAATGTAGGCCCTCA
 82▶ V A V I T D F D K Q G N S V A S G I A I A E A C V T V R G I Y A E

2601 ATGTGGACAGCAGAGATGATCTCCCGAGCTTTGGTCCTGATGGCCGCCCGACATGGTGCTTGTGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGA
48 I H V A S I I E G T K T R I A A G V H H K N D E Y L M T I K E T A V
BbsI (2738)
2701 CCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATG
15 E V L E L D Q Q S I N F T K M
AseI (2800)
2801 ATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCC
SpeI (2955)
2901 CATTTCGCTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTT
SnaBI (3083)
3001 GGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCC
NdeI (3188)
3101 AAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACAC
3201 TTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATT
PacI (3374)
3301 GACGTCAATGGCGGGGGTCTGTTGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAAATAAGAACATGTGAGCAAAGG
SdaI (3366) BspLU11I (3384)
3401 CCAGCAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAG
3501 AGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACC
ApaLI (3698)
3601 TGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCCGGTGTAGGTGCTTCGCTCCAAGCTGGGCTGTGT
3701 GCACGAACCCCCGTTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCC
3801 ACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTA
3901 TCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTGTTTGCAA
4001 GCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATT
EagI (4134)
PacI (4114) SwaI (4123) NotI (4133)
4101 TTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACT
4201 AACATACGCTCTCCATCAAAAACAAAACGAAAACAAAACAACTAGCAAATAGGCTGTCCCGAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA