



PvuI (7)
SgfI (6)
MfeI (82)

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)

Psp1406I (203)
PvuII (239)
Bsu36I (291)

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)
AgeI (552) **NcoI (560)**

501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCACCATGGTGACGCTCGCCGAGCTGCTGGCGCTGCTGGCCG

BstEII (669)

BsrBI (664)

601 GCTGCTGGCCACGGCCTCGGCTACTTTGTCAGCATCGACGCGCACGCCGAGGAGTGCTTCTCGAGCGGGTCACTCCGGCACCAAGATGGGCTCATC

13▶ L L A T A S G Y F V S I D A H A E E C F F E R V T S G T K M G L I

701 TTCGAGGTGGCGGAGGGCGGCTTCTGACATCGACGTGGAGATCACAGGACCAGATAATAAAGGAATCTATAAAGGAGACCGGGAGTCCAGCGGAAAGT

47▶ F E V A E G G F L D I D V E I T G P D N K G I Y K G D R E S S G K

801 ACACATTTGCAGCCACATGGATGGACATAACAAGTTCTGCTTTAGCAATAGGATGTCCTACTATGACTCCAAAGATAGTAATGTTACCATTGACATTGG

80▶ Y T F A A H M D G T Y K F C F S N R M S T M T P K I V M F T I D I G

AseI (961)

901 GGAGGCTCCCAAAGGACAAGACATGGAGACAGAAGCTCATCAGAACAAGCTAGAAGAAATGATTAATGAGCTGGCAGTGGCAATGACAGCCGTAAGCAC

113▶ E A P K G Q D M E T E A H Q N K L E E M I N E L A V A M T A V K H

BstBI (1084)

1001 GAACAGGAGTACATGGAAGTCCGGGAGAGAATACACAGAGCCATCAATGACAACACAAACAGCAGAGTGGTCTTTGGTCTTCTTGAAGCTCTTGTTC

147▶ E Q E Y M E V R E R I H R A I N D N T N S R V V L W S F F E A L V

MscI (1180)

BglII (1121)
BspEI (1151)
NheI (1174)

1101 TAGTTGCCATGACATTGGGACAGATCTACTACCTGAAGAGATTTTTGAAGTCCGGAGGTTGTTTTAAAAGGCCCTAGCTGGCCAGACATGATAAGATA

180▶ L V A M T L G Q I Y Y L K R F F E V R R V V •

1201 CATTGATGAGTTTGGACAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGC

HpaI (1312) **MfeI (1323)**

1301 TGCAATAAAACAAGTTAAACAACAATTGCATTCATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAAT

EcoRI (1408)

1401 GTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCA

SapI (1590)

1501 GGGGCTGTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGATTTTCCCAAGGTTTGAAGTAGCTCTTCATT

SspI (1647) **SwaI (1661)**

1601 TCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTA

EcoO109I (1722)

1701 TTAGGCAGAAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAG

1801 AAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGATGAGTTCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGC

SacI (1922)

1901 AGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGC

113▶ 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 V A

StuI (2086)

2001 CACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGAACCTGCCAATGTAGGCCTCAATGTGG

80▶ 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 I H

2101 ACAGCAGAGATGATCTCCCAGTCTGGTCTGAGTGGCCGCCCGACATGGTCTTGTTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCA

46▶ 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 E V

BbsI (2232)
XmnI (2228)

2201 CCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGCTGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAAT

13▶ L E L D Q Q S I N F T K M

AseI (2294)

2301 TGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTG
SacI (2351)

2401 CGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAAT
SpeI (2449)

2501 CCCCCTGAGTCAAACCGCTATCCAGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAG
SnaBI (2577)

2601 GAAAGTCCATAAGGTCACTGACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATG
NdeI (2682)

2701 TACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTC

2801 AATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATAAGAACATGTGAGCAAAAGGCCAGCA
PacI (2868)
PstI (2861)
SdaI (2860) BspLU11I (2878)

2901 AAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGG
BspLU11I (2878)

3001 CGAAACCCGACAGGACTATAAAGATACCAGGCTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCTGTTCGACCCTGCCGCTTACCGGATACCTGTCCG

3101 CCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCTCCAAGCTGGGCTGTGTGCACGA
ApaLI (3192)

3201 ACCCCCCGTTAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATGCCACTGGCAGCAGCCACTGGT

3301 AACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCG

3401 CTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTGTTTGAAGCAGCA

3501 GATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTC

3601 ATGGCTAGTTAATTAACATTTAATCAGCGGCCCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATA
EagI (3628)
PacI (3608) SmaI (3617) NotI (3627)

3701 CGCTCTCCATCAAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA