



PvuI (7)
SgfI (6) MfeI (82) EcoNI (96)
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245) **Bsu36I (291)**
Psp1406I (203) **PvuII (239)** EcoNI (287)
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGTCTTTGTTTCGTTT

NcoI (560)
BstEII (555)
AgeI (552)
501 TCTGTTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCACCATGGATCAGTTCCTGAATCAGTGACAGAAAACCTTTGA
1▶ M D Q F P E S V T E N F E

StuI (617) **XcmI (689)**
601 GTACGATGATTTGGCTGAGGCGCTTATATTGGGGACATCGTGGTCTTTGGGACTGTGTTCTGTCCATATTCTACTCCGTCATCTTTGCCATTGGCCTG
13▶ Y D D L A E A C Y I G D I V V F G T V F L S I F Y S V I F A I G L
701 GTGGGAAATTTGTTGGTAGTGTTGGCCCTACCAACAGCAAGAAGCCCAAGAGTGTCCAGGACATTTACCTCCTGAACCTGGCCTTGTCTGATCTGCTGT
47▶ V G N L L V V F A L T N S K K P K S V T D I Y L L N L A L S D L L
801 TTGTAGCCACTTTGCCCTTCTGACTCACTATTTGATAAATGAAAGGCGCTCCACAATGDCATGTGCAAATCACTACCGCCTTCTTCTCATTGGCTT
80▶ F V A T L P F W T H Y L I N E K G L H N A M C K F T T A F F F I G F

MscI (947) **RsrII (982)**
901 TTTTGAAGCATATTCTTCATCACCGTCATCAGCATTGATAGGTACCTGGCCATCGTCTGGCGCCAACTCCATGAACAACCGGACCTGCAGCATGGC
113▶ F G S I F F I T V I S I D R Y L A I V L A A N S M N N R T V Q H G

AvrII (1011)
1001 GTCACCATCAGCCTAGGGCTCTGGGCGAGCAGCCATTTTGGTGGCAGCACCCAGTTCATGTTTCAAAAGCAGAAAGAAAATGAATGCCTTGGTACTACC
147▶ V T I S L G V W A A A I L V A A P Q F M F T K Q K E N E C L G D Y
1101 CCGAGTCTCCAGGAAATCTGGCCGTGCTCCGCAATGTGAAACAATAATTTCTTGGCTTCTACTCCCCTGCTCATTATGAGTTATTGCTACTTTCAG
180▶ P E V L Q E I W P V L R N V E T N F L G F L L P L L I M S Y C Y F R
1201 AATCATCCAGACGCTGTTTTCTGCAAGAACCACAAGAAAGCCAAAGCCATTAAGTATCCTTCTGGTGGTCATCGTGTCTTCTCTTCTGGACACCC
213▶ I I Q T L F S C K N H K K A K A I K L I L L V V I V F F L F W T P

Psp1406I (1303) **NsiI (1439)**
1301 TACAACGTTATGATTTTCTGGAGACGCTTAAGCTCTATGACTTCTTTCCAGTTGTGACATGAGGAAGGATCTGAGGCTGGCCCTCAGTGTGACTGAGA
247▶ Y N V M I F L E T L K L Y D F F P S C D M R K D L R L A L S V T E

NsiI (1610) **NheI (1637)** **MscI (1643)**
1601 AGTGATGGAGATGATTGCTCCTTCTCTGAAGGAATGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAATGCAG
347▶ S D G D A L L L L •

HpaI (1775) **MfeI (1786)**
1701 TGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAAACAACAATTGCATTCA

EcoRI (1871)
1801 TTATGTTTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTT
1901 TAACCTCAAATCAAGCCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTGCAGCCT

SapI (2053)
2001 CACCTTCTTTCATGGAGTTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTCTTCTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCC

SspI (2110) **SwaI (2124)**
2101 TTTTGTAGTAAATATTGAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATA
2201 TCCCCAGTTTAGTGTGACTTAGGGAACAAGAACCTTTAATAGAATTTGGACAGCAAGAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGA
141▶ • N R T Y K L

SacI (2385)
2301 GGGGATGAGTTCCTCAATGGTGGTTTTGACCAGTTCGCAATTCATCTCAATGAGCACAAGCAGTCCAGGAGCATAGTCAAGATGAGCTCTCGCAT
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
2401 GCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGTCTACA
101▶ 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

StuI (2549)
2501 GCAGACCAATGGCAATGGCTTACGACAGACAGTGCACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCACTTGGTCCCTGATGG
67▶ 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 I A

BbsI (2695)

2601 CCGCCCCGACATGGTGTGTTGTCCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTT
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

XmnI (2691)

2701 CATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACGCGTGGATGGCGTCTCCAGCTTATCTG
1 M

AseI (2757)

SacI (2814)

2801 ACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGCGGAGTTGTTACGACATTTTGAAAG

SpeI (2912)

2901 TCCCGTTGATTTACTAGTCAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGT

SnaBI (3040)

3001 ACTGCCAAAACCGCATCATCATGTAATAGCGATGACTAATACGTAGATGTAAGTCCCAAGTAGGAAAGTCCCATAAAGTCATGTACTGGGCATAATGCCA

NdeI (3145)

3101 GCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACC

3201 CATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGAAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGCGGTCAGCCAGGCGGGC

PacI (3331)

PstI (3324)

SdaI (3323)

BspLU11I (3341)

3301 CATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCG
3401 TTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTC

3501 CCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAG

ApaLI (3655)

3601 CTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTGCGCTTATCCGGT

3701 AACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTA

3801 CAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGATTGG

3901 TAGCTCTTGATCCGGCAAACAACACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCT

EagI (4091)

PacI (4071) **SwaI (4080)** **NotI (4090)**

4001 TTGATCTTTTCTACGGGCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAA

4101 TAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTAACATACGCTCCTCCATCAAACAAAACGAAACAAAACAACTA

4201 GCAAAATAGGCTGTCCCCAGTGCAAGTGCAAGTGCCAGAGTCCAGAACATTTCTCTATCGAA