



100

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

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
EcoNI (287)
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NaeI (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGTCTTTGTTTCGTTT

KasI (535) **AgeI (552)** **BspHI (560)** **EagI (575)**
NotI (574) **SacII (572)**
501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTCATGACCAGCCCCGGCCGCTCAAAGCCGGGAGATCGA
1▶ M T S P A A A Q S R E I D
NruI (672)
601 CTGTTTGAAGCCGGAAGCGCAGAAGCTGGCGGAAGCCCGGCTCGCTGCAAAACGGGCGCCCGCGGAGGCTCGCGAGATCCGCATGAAGGAGCTGGAG
13▶ C L S P E A Q K L A E A R L A A K R A A R A E A R E I R M K E L E
PstI (776)
701 CGGCAGCAGAAGGAGGTAGAAGAGAGACCAGAAAAAGATTTTACTGAGAAGGGGTCTCGTAACATGCCGGGCTGTCTGCAGCCAGCTGGCCTCTCTGG
47▶ R Q Q K E V E E R P E K D F T E K G S R N M P G L S A A T L A S L
801 GTGGGACTTCCTCTCGGAGAGGACGCGGAGACCTCCATCTCCATCGACACCGAGGCATCCATCAGGAAATCAAGGACTCTCTAGCAGAAGTTGAAGA
80▶ G G T S S R R G S G D T S I S I D T E A S I R E I K D S L A E V E E
901 GAAATATAAGAAGGCTATGGTTTCCAATGCTCAGCTAGACAATGAAAAGACAACTTCATGTACCAGGTTGATACCCTAAAAGATATGTTGCTGGAGCT
113▶ K Y K K A M V S N A Q L D N E K T N F M Y Q V D T L K D M L L E L
Bst1107I (1076)
1001 GAAGAACAGCTGGCTGAATCTAGCGGCGAGTACGAAGAGAAAAACAAAGAATTTGAAAGGGAAAAACAGCCACAGTATACTGCAATTTGCTG
147▶ E E Q L A E S R R Q Y E E K N K E F E R E K H A H S I L Q F Q F A
XhoI (1135)
1101 AAGTCAAGGAGGCCCTGAAGCAAAGAGAGGAAATGCTCGAGAAACATGGAATAATCCTAAATTCAGAAATAGTACCAATGGAGAGACTTCCGACACCT
180▶ E V K E A L K Q R E E M L E K H G I I L N S E I A T N G E T S D T L
Sall (1260) **SandI (1273)**
1201 CAATAATGTTGGATACCAAGTCTACCAAGATGACAAAAAGAGATTAATGCCTCAAGTCGACAGGGATGGGACCTAGATATTAGGTTGAAAAAG
213▶ N N V G Y Q G P T K M T K E E L N A L K S T G D G T L D I R L K K
1301 CTGGTTGATGAACGGGAATGCTTATTGGAACAGATTAAGAACTCAAAGGCGAGCTGGAGGAGAGACAGAAGATTGGCAAACCTAGACAATCTTCGATCTG
247▶ L V D E R E C L L E Q I K K L K G Q L E E R Q K I G K L D N L R S
Ppu10I (1429)
NsiI (1429)
1401 AAGATGATGCTTGGAAAACGGGACAGACATGCATGTAATGGACCTACAAAGGGATGCCAACAGACAGATCAGCGACCTCAAATTTAACTTGCAAAATC
280▶ E D D V L E N G T D M H V M D L Q R D A N R Q I S D L K F K L A K S
1501 TGAGCAAGAGATAACTGCATTAGAACAAAATGTAATAAGGTTAGAGAGTCAAGTATCACGTTACAAATCAGCGGCTGAAAATGCAGAAAAATAGAAGAT
313▶ E Q E I T A L E Q N V I R L E S Q V S R Y K S A A E N A E K I E D
XhoI (1666) **DraIII (1684)**
1601 GAACTTAAGCGAGAAAAACGAAACTCAAAGAGAGCTCCGCTCTGCATTGGATAAAACAGAAGGCTCGAGGTGAGCAACGGCCACTTAGTGAAGCGTC
347▶ E L K A E K R K L Q R E L R S A L D K T E E L E V S N G H L V K R
MscI (1779)
NheI (1773)
1701 TGGAAAAATGAAAGCAAATCGGAGTGCCTCTGTCCAGCAGTAAATTCAGCTCTGATCAGGCAACTGGTCTAGCTGGCCAGACATGATAAGATAC
380▶ L E K M K A N R S A L L S Q Q •
1801 ATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCT

HpaI (1911) MfeI (1922)
1901 GCAATAAACAAAGTAAACAACAACATTCATTCTTTATGTTTCAGGTTTCAGGGGAGGTGGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATG

EcoRI (2007)
2001 TGGTATGGAATTCATAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAG
2101 GGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTCTCTCATT

SspI (2246) **SwaI (2260)**
2201 CTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAAATATTTAAATACATCATTGCAATGAAAATAAATGTTTTTAT
2301 TAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTGTGGACTTAGGGAACAAAGAACCTTTAATAGAAATGGACAGCAAGA
2401 AAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCTTTCATCTCAATGAGCACAAAGCA
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 F C
BstXI (2550)
2501 GTCAGGAGCATAGTCAAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCC
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 (2685)

2601 ACAATGGTGTCAAAGTCCTTCTGCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGA
79 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 V
2701 CAGCAGAGATGATCTCCCAAGTCTGGTCTGATGGCCGCCCGACATGGTGCTTGTTCCTCATAGAGCATGGTGATCTTCCAGTGGCGACCTCCAC
46 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

BspHI (2835)

BbsI (2831)

XmnI (2827)

AseI (2893)

2801 CAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATT
13 L E L D Q Q S I N F T K M
2901 GTCAAAACAGCGTGGATGGCGTCTCCAGC T TATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTG

SpeI (3048)

3000 CGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATGACGTCAATGGGGTGGAGACTTGAAA

SnaBI (3176)

3099 TCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTA

NdeI (3281)

3199 GGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGAT

3299 GTACTGCCAAGTGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGT

PstI (3460)

SdaI (3459) PacI (3467)

BspLU11I (3477)

3399 CAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTG C A G G T T A A T T A A G A A C A T G T G A G C A A A A G G C C A

3497 GCAAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCAAAAAATCGACGCTCAAGTCAGAGG

3597 TGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGT

ApaLI (3791)

3697 CCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCA

3797 CGAACCCCCGTTAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGGTAAGACACGACTTATGCCACTGGCAGCAGCCACT

3897 GGTAAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCT

3997 GCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCA

4097 GCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACTCACGTTAAGGGATTTTG

EagI (4227)

PacI (4207) SwaI (4216)

NotI (4226)

4197 GTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAAC

4297 ATACGCTCTCCATCAAAAACAAACGAAACAAACAAACTAGCAAAATAGGCTGTCCCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA