



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

Psp1406I (203) HindIII (245) **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCGCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

AgeI (552) **BspHI (560)**
501 TCTGTTCTGCGCGCTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCATCATGACAACACCAGAAATTCAGTAAATGGGACTTTCCC
1▶ M T T P R N S V N G T F P

BspHI (695)
601 GGCAGAGCCAATGAAAGGCCCTATTGCTATGCAATCTGGTCCAAAACCACTCTTCAGGAGGATGTTTCACTGGTGGGCCCCACGCAAAGCTTCTTCATG
13▶ A E P M K G P I A M Q S G P K P L F R R M S S L V G P T Q S F F M

XcmI (726) SapI (741)
701 AGGGAATCTAAGACTTTGGGGGCTGTCCAGATTATGAATGGGCTCTCCACATTGCCCTGGGGGTCTTCTGATGATCCAGCAGGGATCTATGCACCCA
47▶ R E S K T L G A V Q I M N G L F H I A L G G L L M I P A G I Y A P

Acc65I (815) **BspEI (850)** XcmI (884)
801 TCTGTGTGACTGTGTGGTACCCTCTCTGGGAGGCATTATGTATATTATTTCCGGATCACTCCTGGCAGCAACGGAGAAAACTCCAGGAAGTGTGGT
80▶ I C V T V W Y P L W G G I M Y I I S G S L L A A T E K N S R K C L V

EcoRI (918) SspI (979)
901 CAAAGGAAAAATGATAATGAATTCATTGAGCCTCTTGTGCCATTTCTGGAATGATTCTTCAATCATGGACATACTTAATATAAAATTTCCATTTT
113▶ K G K M I M N S L S L F A A I S G M I L S I M D I L N I K I S H F

1001 TTAATAATGGAGAGTCTGAATTTTATTAGAGCTCACACACCATATATTAACATATACAACCTGTGAACCAGCTAATCCCTCTGAGAAAACTCCCATCTA
147▶ L K M E S L N F I R A H T P Y I N I Y N C E P A N P S E K N S P S

BsaBI (1149)
1101 CCCAATACTGTTACAGCATAACAATCTCTGTTCTTGGGCATTTTGTGAGTGTGCTGATCTTTGCCTTCTCCAGGAACCTGTAATAGCTGGCATCGTTGA
180▶ T Q Y C Y S I Q S L F L G I L S V M L I F A F F Q E L V I A G I V E

1201 GAATGAATGGAAAAGAACGTGCTCCAGACCCAAATCTAACATAGTTCTCTGTGAGCAGAAAGAAAAAGAACAGACTATTGAAATAAAAGAAAGAGTG
213▶ N E W K R T C S R P K S N I V L L S A E E K K E Q T I E I K E E V

XmnI (1348)
1301 GTTGGCTAACTGAAACATCTTCCCAACCAAAGATGAAGAAGACATTGAAATATTCCAATCCAAGAAGAGGAAGAAGAAGAACAGAGACGAACTTTC
247▶ V G L T E T S S Q P K N E E D I E I I P I Q E E E E E T E T N F

MscI (1478)
NheI (1472)
1401 CAGAACCTCCCAAGATCAGGAATCCTCACCAATAGAAAATGACAGCTCTCCTTAAGTGATTTCTTGTGTTGCTAGCTGGCCAGACATGATAAGATACA
280▶ P E P P Q D Q E S S P I E N D S S P •

1501 TTGATGAGTTTGGACAAACACAACACTAGAATGCAGTGAAGAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTG

HpaI (1610) MfeI (1621)
1601 CAATAAACAAGTTAAACAACAACAATTGCATTCATTTTATGTTTCAGGTTCAAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGT

EcoRI (1706)
1701 GGTATGGAATTTCTAAATACAGCATAGCAAACCTTAACTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGG

SapI (1888)
1801 GGCTGTTGCCAATGTGCATTAGCTGTTTGAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTCTTCATTTTC

SspI (1945) SwaI (1959)
1901 TTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAAATATTTAAATACATCATTGCAATGAAAATAATGTTTTTTATT

2001 AGGCAGAAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTTGGACAGCAAGAA

2101 AGCGAGCTTCTAGCTTTAGTTTCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAG
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 (2249)
2201 TCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCA
112▶ 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 V

StuI (2384)
2301 CAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCTGCCAATGTAGGCCCTCAATGTGGAC
79▶ 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

2401 AGCAGAGATGATCTCCAGTCTTGGTCTGATGGCGCCCGACATGGTCTTGTGCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACC
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 (2534)

2501 AGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTG
12 L E L D Q Q S I N F T K M

2601 TCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTGCG

XmnI (2526) *AseI* (2592)

2701 TCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATTTGACGTCAATGGGGTGGAGACTTGAAATCC

SpeI (2747)

2801 CCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGA

SnaBI (2875)

2901 AAGTCCATAAAGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTA

NdeI (2980)

3001 CTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAA

PacI (3166)

3101 TGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATTAAGAACATGTGAGCAAAGGCCAGCAA

PstI (3159) *SdaI* (3158) *BspLU11I* (3176)

3201 AGGCCAGGAACCGTAAAAAGGCCGCTTGTGCGCTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCG

3301 AAACCCGACAGGACTATAAAGATACCAGGCTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCC

ApaLI (3490)

3401 TTTCTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTTCGCTCCAAGCTGGGCTGTGTGCACGAAC

3501 CCCCCGTTACGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAA

3601 CAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGCTACACTAGAAGAACAGTATTTGGTATCTGCGCT

3701 CTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGA

3801 TTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCAT

EagI (3926)

PacI (3906) *SwaI* (3915) *NotI* (3925)

3901 GGCTAGTTAATTAACATTTAAATCAGCGGCCCAATAAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACG

4001 CTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA