



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

HindIII (245) Bsu36I (291)
Psp1406I (203) PvuII (239) EcoNI (287)
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BspLU11I (560)
AgeI (552)
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTCAACATGTTTCAGAATGCACACTCTGGAAGCCAATGGCTACT
1▶ M F Q N A H S G S Q W L L

BamHI (689)
NcoI (685)
601 TCCACCACTGACAATTCTGCTGCTGTTTGTCTTTGCGACAGGCGAGAGTGCAGCTCTTCCGAAGGCTGTGGTAAACTGGACCCCATGGATCCAGGTG
13▶ P P L T I L L L F A F A D R Q S A A L P K A V V K L D P P W I Q V

BstXI (738)
SandI (733) BspEI (788)
701 CTCAAGGAAGACATGGTGACACTGATGTGCGAAGGGACCCACAACCTGGGAACCTTCTACCCAGTGGTTCCACAACGGGAGGTCCATCCGGAGCCAGG
47▶ L K E D M V T L M C E G T H N P G N S S T Q W F H N G R S I R S Q

BglII (888)
801 TCCAAGCCAGTTACACGTTAAGGCCACAGTCAATGACAGTGGAGAATATCGGTGTCAAATGGAGCAGACCCGCTCAGCGACCTGTAGATCTGGGAGT
80▶ V Q A S Y T F K A T V N D S G E Y R C Q M E Q T R L S D P V D L G V
901 GATTTCTGACTGGCTGCTGCTCCAGACCCCTCAGCGGGTGTCTTCTGGAAGGGGAAACCATCACGTAAGGTGCCATAGCTGGAGGAACAACTACTGAAC
113▶ I S D W L L L Q T P Q R V F L E G E T I T L R C H S W R N K L L N

XcmI (1077)
1001 AGGATCTCATTCTCCATAATGAAAAATCCGTGAGGTATCATCACTACAAAAGTAATTTCTCTATCCAAAAGCCAACACAGTCACAGTGGGGACTACT
147▶ R I S F F H N E K S V R Y H H Y K S N F S I P K A N H S H S G D Y

Acc65I (1196)
1101 ACTGCAAAGGAAGTCTAGGAAGTACACAGCACCAGTCCAAGCCTGTCACCATCACTGTCCAAGATCCAGCAACTACATCCTCCATCTCTAGTCTGGTA
180▶ Y C K G S L G S T Q H Q S K P V T I T V Q D P A T T S S I S L V W Y

BsiWI (1263) SnaBI (1261) ScaI (1292)
1201 CCACACTGCTTTCTCCCTAGTGATGTGCCTCCTGTTTGCAGTGGACACGGGCCTTTATTTCTACGTACGGAGAAATCTTCAAACCCCGAGGGGACTGCTGG
213▶ H T A F S L V M C L L F A V D T G L Y F Y V R R N L Q T P R E Y W

MscI (1383) XcmI (1352) **NheI (1377)**
1301 AGGAAGTCCCTGTCAATCAGAAAGCACCAGGCTCCTCAAGACAAGTGACACCCCATCCATCCTATGGCAAACATACGGCTAGCTGGCCAGACATGATAAG
247▶ R K S L S I R K H Q A P Q D K •
1401 ATACATTGATGAGTTGGACAAACCACAACAGTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATA

HpaI (1515) MfeI (1526)
1501 AGCTGCAATAAACAAGTTAAACAACAATTGCATTATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACA

EcoRI (1611)
1601 AATGTGGTATGGAATTCTAAAATACAGCATAGCAAACCTTAACTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCA

SapI (1793)
1701 TCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTTCCCAAGTGTGAACTAGCTCTTC

SspI (1850) SmaI (1864)
1801 ATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAAATATTTAAATACATCATTGCAATGAAAATAAATGTTTT

EcoO109I (1925)
1901 TTATTAGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGC

SacI (2125) BstXI (2154)
2001 AAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAA
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
2101 AGCAGTCAGGAGCATAGTCAAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGAC
114▶ 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 V

StuI (2289)
2201 AGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGCACCTGCCAATGTAGGCTCAATG
81▶ 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 I
2301 TGGACAGCAGAGATGATCTCCCACTTGGTCTGATGGCCGCCCGACATGGTGTGTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCT
47▶ 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 E

BbsI (2435)
2401 CCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATT
14 V L E L D Q Q S I N F T K M ← XmnI (2431) AseI (2497)

SacI (2554)
2501 AATTGTCAAACACGCGTGGATGGCGTCTCCAGCTTATCTGACGTTCACTAAACGAGCTCTGTTATATAGACCTCCACCGTACACGCTACCGCCAT
←

SpeI (2652)
2601 TTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGG
←

SnaBI (2780)
2701 AATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAG
←

NdeI (2885)
2801 TAGGAAAGTCCATAAAGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTG
←

2901 ATGTACTGCCAAGTGGGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGAC
←

PacI (3071)
PstI (3064)
SdaI (3063) BspLU11I (3081)
3001 GTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATTAAGAACATGTGAGCAAAAAGGCCA
←

3101 GCAAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAATAATCGACGCTCAAGTCAGAGG
←

3201 TGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCTGCCGTTACCGGATACCTGT
←

ApaLI (3395)
3301 CCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCA
←

3401 CGAACCCCGCTTACGCCGACCGCTGCGCCTTATCCGTAACATATCGTCTTGTAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACT
←

3501 GGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCT
←

3601 GCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGCAAGCA
←

3701 GCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTG
←

EagI (3831)
PacI (3811) SwaI (3820) NotI (3830)
3801 GTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAAATATCTTTATTTTATTACATCTGTGTGGTTTTTTTGTGTAATCGTAACTAAC
←

3901 ATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCCAGTGCAAGTGACAGGTGCCAGAACATTTCTCTATCGAA