



PvuI (7) SgfI (6) MfeI (82)
1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCCGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGAAAAGTGTCTGTACTGGCTCCGCTTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) HindIII (245) Bsu36I (291)
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTTT

AgeI (552) NcoI (568) PshAI (575)
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTAGGAGGGCCACCATGGCGACCACCGTCAGCACGCAGCGCGGG
1▶ M A T T V S T Q R G

BsrGI (604)
601 CCGGTGTACATTGGTAACTCCCCAGGACTTCTCCGTATAACCCACACAACAGCAGCAGCAGATCCAGCTGGATGCCAGGCAGCCAGCAGCTGC
11▶ P V Y I G E L P Q D F L R I T P T Q Q Q Q I Q L D A Q A A Q Q L

Acc65I (717)
701 AGTATGGAGAACAGTTGGTACCGTGGTCGCCTCAGCATCACTGTGGTACAGGCAAATTGGCAAAGAATTATGGCATGACTCGTATGGACCCTTACTG
44▶ Q Y G G T V G T V G R L S I T V V Q A K L A K N Y G M T R M D P Y C

ApaLI (884)
801 CCGTCTGCGTCTGGGCTATGCTGTTTATGAACTCCCACAGCACACAATGGGGCCAAGAACCCTCGTGAACAAAGTCATTAGTGCACAGTGCCCCCA
77▶ R L R L G Y A V Y E T P T A H N G A K N P R W N K V I Q C T V P P

BglII (922) BssHII (935) NcoI (946)
901 GGTGTGGACTCGTTCTACCTTGAGATCTTCGATGAGCGCGCCTTCTCCATGGATGACCGCATAGCTTGGACCCACATCACCATCCCCGAGTCCCTGAAGC
111▶ G V D S F Y L E I F D E R A F S M D D R I A W T H I T I P E S L K
1001 AGGGCAAAGTGGAGGACGAGTGGTATAGCCTGAGTGGGAGGCAGGGCATGACAAGGAGGGCATGATTAACCTGGTCATGTCCTACACGTCCTCCACG
144▶ Q G Q V E D E W Y S L S G R Q G D D K E G M I N L V M S Y T S L P A

XcmI (1148)
1101 TGCCATGATGATGCCTCCTCAGCCTGTGGTCTGATGCCAAGTGTGTACCAGCAGGGTGTGGCTATGTGCCATTGCAGGGATGCCTGCTGTCTGCAGC
177▶ A M M M P P Q P V V L M P T V Y Q Q G V G Y V P I A G M P A V C S

MscI (1216) EcoO109I (1264) BspLU11I (1285)
1201 CCTGGCATGGTGGCCGATGGCCATGCCCCACAGCTGTGGTCTCAGCCCCGCTGTAATGAAGAGGACCTCAAAGTATCCAGGACATGTTTCCCAACA
211▶ P G M V P M A M P P P A V A P Q P R C N E E D L K A I Q D M F P N
1301 TGGACAGGGAAGTAACTCGTTCTGTGCTTGAAGCCAGAGAGGGAACAAAGATGCTGCCATCAATTCTTGTGCAAATGGGTGAAGAGTCTAGACCCG
244▶ M D R E V I R S V L E A Q R G N K D A A I N S L L Q M G E E S •

MscI (1465) NheI (1459)
1401 CCTGTGGCCCTTGCTTACACCACTGACCTTGACTTGTCCACCCAGGGCTCCCCAGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGG

HpaI (1597)
1501 ACAAACCAACTAGAAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTT

MfeI (1608) EcoRI (1693)
1601 AACAAACAATTGCATTCATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCT
1701 AAAATACAGCATAGCAAACTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAAT

SapI (1875)
1801 GTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAA

SspI (1932) SmaI (1946)
1901 TGCACTGACCTCCACATTCCTTTTTAGTAAAAATTCAGAAAATAATTTAAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAG

EcoO109I (2007)
2001 ATGCTCAAGGCCCTTCATAATATCCCCAGTTTGTAGTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAG

2101 CTTTGTCTCTGGTGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGT
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 D P A Y D

SacI (2207) BstXI (2236)
2201 CAGAGATGAGCTCTGTCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAA
108▶ 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 I T D F

StuI (2371)
2301 GTCCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATC
75▶ 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 A S I I

2401 TCCCCAGTCTTGGTCCTGATGGCCGCCCGACATGGTGCTTGTGTCCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCT
41 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 L E L D Q

BbsI (2517)
XmnI (2513) AseI (2579)

2501 GCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACGCGTG
8 Q S I N F T K M

SacI (2636)

2601 GATGGCGTCTCCAGCTTATCTGACGGTTCACATAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTGCGTCAATGGGGCGGA

SpeI (2734)

2701 GTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAAC

SnaBI (2862)

2801 CGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGG

NdeI (2967)

2901 TCATGTACTGGGCATAATGCCAGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGC

3001 AGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGGCGGGTGC

PacI (3153) SdaI (3145) BspLU11I (3163)

3101 TTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACCGCTGCAGGTTAAATAAGAACAATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCG
3201 TAAAAAGCGCGCTTGTGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAATAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGA
3301 CTATAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGG

ApaLI (3477)

3401 GAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCC
3501 CGACCGCTGCGCCTTATCCGTTAACTATCGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAG
3601 GCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAG
3701 TTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAA

PacI (3893)

3801 AAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTA

EagI (3913)
Swal (3902) NotI (3912)

3901 ACATTTAAATCAGCGGCCCAATAAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAAA
4001 CAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA