



PvuI (7) SgfI (6) MfeI (82)
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGTCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) HindIII (245)
201 GTGAACGTTCTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTTCACGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGGTTGAGTCGCGTTTCTGCCGCCCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

AgeI (552) NcoI (568) SacII (585)
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACCCGGTAGGAGGGCCACCATGGAAACCCCGAAACCCGGGATTTTGCC
1 M E T P K P R I L P
BamHI (673)
601 TGGCTGGTGTACAGCTGGACCTGGGGCAGCTGGAAGGCTGGCTGGCTGGATGAGAGCCGAACGAGGTTTCAGGATCCCGTGGAAAGCATGGCCCTACGGC
11 W L V S Q L D L G Q L E G V A W L D E S R T R F R I P W K H G L R
701 AGGACGCACAGATGGCTGACTTTGGCATCTTCCAGGCCGTCAGGAGCCAGTGGTGCCTACACCCCGGGGAAGGATAAGCCGGACGTGTCAACTGGAA
44 Q D A Q M A D F G I F Q A W A E A S G A Y T P G K D K P D V S T W K
801 GAGGAATTTCCGGTCAGCCCTGAACCGAAAGAAGTGTGCGTTAGCTGCTGACAATAGCAAGGACCCTTATGACCCTATAAAGTGTATGAGTTTGTG
77 R N F R S A L N R K E V L R L A A D N S K D P Y D P H K V Y E F V
901 ACTCCAGGGGCGCGGACTTCTGACATCTGGTGCCTCTCTGACACCAATGGCAAAAGCAGCCTGCCTCACTCCAGGAAAACCTACCGAAGTTATTTG
111 T P G A R D F V H L G A S P D T N G K S S L P H S Q E N L P K L F

Bsp120I (1014) BglII (1040) XmnI (1091)
1001 ATGGCCTGATCTTGGGGCCCTCAAAGATGAGGGGCTCAGATCTGGCTATTGTTTCTGATCCTTCAACAACCTGCCAAGCCCAATGTGAACAACCT
144 D G L I L G P L K D E G S S D L A I V S D P S Q Q L P S P N V N N F

NheI (1139) BstEII (1166) BbsI (1194)
1101 CCTAAACCTGCACCCCAAGAAAATCCACTGAAGCAGCTGCTAGCTGAGGAACATGGGAGTTTCGAGGTGACCCGCTTACCGAGGCCGCCAGGTCTTC
177 L N P A P Q E N P L K Q L L A E E Q W E F E V T A F Y R G R Q V F
1201 CAGCAGACTCTTTTCCCGGGGGGCTCGGGCTGGTGGGAGCAGCTGACATGACACTGCCTGGCAGCCAGTACCCTGCCGATCCTGAGGGGT
211 Q Q T L F C P G G L R L V G S T A D M T L P W Q P V T L P D P E G

HindIII (1311) Bsp120I (1393)
1301 TTCTGACGGACAAGCTTGTGAAGGAGTACGTGGGGCAGGTGCTCAAAGGCTGGCAATGGGCTGGCACTGTGGCAGGCTGGGCAAGTCTGGGCCCA
244 F L T D K L V K E Y V G Q V L K G L G N G L A L W Q A G Q C L W A Q

AvrII (1403)
1401 GCGCCTAGGCCACTCCCACGCCTTCTGGGCTCTGGGGAGGAGCTGCTTCCAGACAGTGGGCGAGGGCCTGATGGAGAGTCCACAAGGACAAGGACGGA
277 R L G H S H A F W A L G E E L L P D S G R G P D G E V H K D K D G

BglII (1529) DraIII (1574)
1501 GCCGTGTTGACCTCAGGCCCTTCTGGCAGATCTGATTGCCTTCATGGAAGGAAGTGGACACTCCCCACGCTACACTCTGTGGTTCTGCATGGGGGAAA
311 A V F D L R P F V A D L I A F M E G S G H S P R Y T L W F C M G E

BspLU11I (1656)
1601 TGTGGCCCCAGGACCAGCCGTGGGTCAAGAGGCTGTGTGATGGTCAAGGTTGTTCCCTACATGTCTTAAGGAGCTGTAGAGATGGCCCGGAAAGGGGAGC
344 M W P Q D Q P W V K R L V M V K V V P T C L K E L L E M A R E G G A
1701 CTCTTCACTGAAAACCGTGACTTGCACATCTCCAACAGCCAGCTATCTCCCTACCTGTACCAGTACAAGCCCTACTCCAGGACTTGGTGGAGGAC
377 S S L K T V D L H I S N S Q P I S L T S D Q Y K A Y L Q D L V E D

BstXI (1808) BstAPI (1855) EcoRI (1871) NheI (1877)
1801 ATGGACTTCCAGGCCACTGGAAATCTGAGCCCCACTCAGCTGCTACCAATAAAGCAGTTTATGCCGCGAGAATTCGCTAGCTCGACATGATAAGATAC
411 M D F Q A T G N I •
1901 ATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAGAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTGAAATTTGTGATGC

HpaI (2040) MfeI (2051)
2001 TATTGCTTTATTGTAAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACATTGCATTCATTTTATGTTTCAGGTTACGGGGAGGTGTGGGAGGTT

EcoRI (2136)
2101 TTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTCAAATACAGCATAGCAAACCTTAAACCTCCAAATCAAGCCTCACTTGAATCCTTTT
2201 CTGAGGGATGAATAAGGCATAGGCATCAGGGGCTTGGCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATT

SapI (2318) SspI (2375) SmaI (2389)
2301 TTCCCAAGGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAAATGCAGTACCTCCCACATTCCTTTTATGATAAAATTCAGAAAATAATTTAAATACA
2401 TCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAG
2501 GAACCTTTAATAGAAATTTGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGC
141 • N R T Y K L P I L E E I T T K V L

SacI (2650) BstXI (2679)
2601 TTGCCATTCACTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCA
122 K G N M E I L V F 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
2701 CCTCATCAGAGTAGGGTGCCTGACAGCCCAATGGTGTCAAAGTCTTCTGCCGTTGCTCAGCAGACCCCAATGGCAATGGCTTACGACAGCAGT
89 E D S Y P H R V 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

2801 GACCTGCCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGCTCTGATGGCCGCCCCGACATGGTGCTTGTGCTCATAGAGC
 56 V R G I Y A E I 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
 BbsI (2960)
 XmnI (2956)
 2901 ATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACT
 22 M T I K E T A V E V L E L D Q Q S I N F T K M
 AseI (3022) SacI (3079)
 3001 ATCCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCT
 SpeI (3177)
 3101 CCCACCGTACACGCCTACGCCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATT
 3201 GACGTCAATGGGGTGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATG
 SnaBI (3305)
 3301 ACTAATACGTAGATGTAAGTCCATAAGGTCAAGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGG
 NdeI (3410)
 3401 GCGTACTTGGCATATGATACACTTGTACTGCAAGTGGGCAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTTAC
 PacI (3596)
 PstI (3589)
 SdaI (3588)
 3501 TATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAA
 BspLU11I (3606)
 3601 ITAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCA
 3701 CAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCG
 3801 ACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGTTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCG
 ApaLI (3920)
 3901 TTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGA
 4001 CTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTAC
 4101 ACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTA
 4201 GCGGTGGTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGCTGACGCTCAGTGGAA
 EagI (4356)
 PacI (4336) SmaI (4345) NotI (4355)
 4301 CGAAAACACGTTAAGGGATTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTCATTACATCTGTGTGTTG
 4401 GTTTTTTGTGTAATCGTAACATAACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGC
 4501 CAGAACATTTCTCTATCGAA