



PvuI (7)
SgfI (6)
MfeI (82) **EcoNI (96)**

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
Bsu36I (291)

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACACGCCGCCGCCCTACCTGAGGCC
 301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

BspHI (560)

501 TCTGTTCTGCGCGCTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCATCATGAATAGGCACCTCTGGAAGAGCCAACCTGTGTGAGAT
1▶ M N R H L W K S Q L C E M

601 GGTGCAGCCAGTGGTGGCCCGGCAGCAGATCAGGACGTAAGCTCTCCTCTGGGGAAGCCAGCCATGCTGCACCTGCCTTCAGAACAGGGC
 13▶ V Q P S G G P A A D Q D V L G E E S P L G K P A M L H L P S E Q G

Eco47III (716)
Eco47III (782)

701 GCTCTGAGACCTCCAGCGTCTGCGGGAGTGGAGCAGTCAAGAGCTCCGAGATGCCATCCGGCAGAGCAACCAGATTCTGCGGGAGCGTCCGAGGAGCTTC
 47▶ A P E T L Q R C L E E N Q E L R D A I R Q S N Q I L R E R C E E L

XmnI (828)
XcmI (860)

801 TGCATTTCCAAGCCAGCCAGAGGGAGGAGAAGGAGTTCCTCATGTGCAAGTTCAGGAGGCCAGGAACTGGTGGAGAGACTCGGCCTGGAGAAGCTCGA
 80▶ L H F Q A S Q R E E K E F L M C K F Q E A R K L V E R L G L E K L D

BstAPI (918)
BstXI (860)

901 TCTGAAGAGGCAGAAGGAGCAGGCTCTGCGGGAGTGGAGCACCTGAAGAGATGCCAGCAGCAGATGGCTGAGGACAAGGCCTCTGTGAAAGCCAGGTG
 113▶ L K R Q K E Q A L R E V E H L K R C Q Q Q M A E D K A S V K A Q V

XmaI (1082)

1001 ACGTCCTTGTCTGGGAGCTGCAGGAGAGCCAGAGTCTGCTTGGAGGCTGCCACTAAGGAATGCCAGGCTCTGGAGGGTCCGGCCCGGGCCGAGCGAGC
 147▶ T S L L G E L Q E S Q S R L E A A T K E C Q A L E G R A R A A S E

DraIII (1144)
SphI (1169)

1101 AGGCGCGGACAGTGGAGAGTGGAGCGGAGGCGCTGCGAGCAGCAGCAGCGTGGACCGTCCGATGCAGGGCCAGAGCGTGGAGGCCGCGCT
 180▶ Q A R Q L E S E R E A L Q Q Q H S V Q V D Q L R M Q G Q S V E A A L

BstAPI (1143)
FspI (1166)

1201 CCGCATGGAGCGCCAGGCCGCTCGGAGGAGAAGGAAAGCTGGCCAGTTGCAAGTGGCCTATCACCAGCTCTTCCAAGAATACGACAACCACATCAAG
 213▶ R M E R Q A A S E E K R K L A Q L Q V A Y H Q L F Q E Y D N H I K

BsrBI (1318)
BglII (1344)

1301 AGCAGCGTGGTGGCAGTGAGCGGAAGCGAGGAATGCAGCTGGAAGATCTCAAACAGCAGCTCCAGCAGGCCGAGGAGGCCCTGGTGGCCAAACAGGAGG
 247▶ S S V V G S E R K R G M Q L E D L K Q Q L Q Q A E E A L V A K Q E

ClaI (1402)
EcoRV (1477)

1401 TGATCGATAAGCTGAAGGAGGAGGCCGAGCAGCACAAGATTGTGATGGAGACCGTCCGGTGTGTAAGGCCAGGCGGATATCTACAAGCGGACTTCCA
 280▶ V I D K L K E E A E Q H K I V M E T V P V L K A Q A D I Y K A D F Q

XmaI (1514)
SdaI (1545)

1501 GGCTGAGAGGCGCCCGGAGAAAGCTGGCCGAGAAGAAGGAGCTCCTGAGGAGCAGCTGGAGCAGCTGCAGAGGGAGTACAGCAAACCTGAAGGCCAGC
 313▶ A E R Q A R E K L A E K K E L L Q E Q L E Q L Q R E Y S K L K A S

1601 TGTCAGGAGTCCGCCAGGATCGAGGACATGAGGAAGCGGCATGTCGAGGTCTCCAGGCCCTTGCCTCCGCTCTCCTCTCCCTGG
 347▶ C Q E S A R I E D M R K R H V E V S Q A P L P P A P A Y L S S P L

BspLU11I (1797)

1701 CCCTGCCAGCCAGAGGAGGAGCCCCCGAGGAGCCACTGACTTCTGCTGTCCCAAGTGCCAGTATCAGGCCCTGATATGGACACCTGCAGATACA
 380▶ A L P S Q R R S P P E E P P D F C C P K C Q Y Q A P D M D T L Q I H

MscI (1829)

1801 TGTCATGGAGTGCATTGAGTAGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCAACTAGAATGCAGTGAATAAATGCTT
 413▶ V M E C I E •

HpaI (1961) **MfeI (1972)**

1901 TATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAACAAACAATTGCATTTTATGTTTCAGGTT

EcoRI (2057)

2001 CAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAAATTCATAAATACAGCATAGCAAACTTTAACCTCCAATCA
 2101 AGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTTCATG

SspI (2296)

2201 GAGTTTAAGATATAGTGTATTTTCCAAGGTTGAACTAGCTCTTCATTTCTTTATGTTTAAATGCACTGACCTCCACATTCCCTTTTATGAAAAA

SwaI (2310)

2301 TTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTGT

2401 AGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGGATGAGTTCC
 141 • N R T Y K L P I L E
 2501 TCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGA
 129 E I T T K V L 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
 BstXI (2600)
 2601 CCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGC
 96 V R I S R D V 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
 StuI (2735)
 2701 AATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCCGACATGG
 63 I A E A C V T 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
 BbsI (2881)
 2801 TGCTTGTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCC
 29 H K N D E Y L M T I K E T A V E V L E L D Q Q S I N F T K M
 XmnI (2877)
 2901 TATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAAC
 AseI (2943)
 3001 GAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCCTTGATTTAC
 SpeI (3098)
 3101 TAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGC
 SnaBI (3226)
 3201 ATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAAGTCAATGTACTGGGCATAATGCCAGGCGGGCCATTTAC
 NdeI (3331)
 3301 CGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCGATTTACCGTAAATACTCCACCCATTGACGTCAATG
 3401 GAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGCTGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGT
 SdaI (3509) PacI (3517) BspLU11I (3527)
 3501 TATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCT
 3601 CCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCC
 3701 CTCGTGGCTCTCCTGTTCCGACCTGCCGCTTACCGGATACCTGTCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGT
 ApaLI (3841)
 3801 ATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGA
 3901 GTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAG
 4001 TGGTGGCCTAACTACGGTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCG
 4101 GCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTAC
 EagI (4277)
 4201 GGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCCAATAAAATATCTTTAT
 PacI (4257) SmaI (4266) NotI (4276)
 4301 TTTCATTACATCTGTGTGTTGGTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGT
 4401 CCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA