



PvuI (7)
SgfI (6)
MfeI (82)

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGCGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAAGTATGTCGTGTACTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

HindIII (245)

Psp1406I (203)
PvuII (239)

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAACTGCGTCCCGCTTAGGTAAGTTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

AgeI (552)
FspI (581)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATTGGCGTACGCATCGGGTGCAGTGCAGCTCATGCG

1 ▶ M A S R I G L R M Q L M R

601 GGAGCAGGCCAGCAGGAGGAGCAGCGAGAGCGCATGCAGCAGCAGGCTGTATGCATTATATGCAACAGCAGCAGCAGCAGCAGCAGCAGCTGGGTGGG

13▶ E Q A Q Q E E Q R E R M Q Q Q A V M H Y M Q Q Q Q Q Q Q L G G

701 CCCCCACCCAGCCATCAACACCCCTGTCACCTCCAGTCCGCCCGCTGTGCCGGGAGGTGCTGAAGTGCAGTCTACCTGGAGAACCCACCT

47▶ P P T P A I N T P V H F Q S P P P V P G E V L K V Q S Y L E N P T

801 CCTACCACCTGCAACAGTCCCAGCATCAGAAGTTTCGGGAGTATCTGTCTGAGACCTATGGGAACAAGTTTGTGTCGCCACGTGAGCCACGCCAAGGTTTC

80▶ S Y H L Q Q S Q H Q K V R E Y L S E T Y G N K F A A H V S P A Q G S

BbrPI (877)

901 CCCGAGCCTGCCCCAGCAGCATCCCCAGGGGTGCGGGCTGGACACGTAAGTGTCCACCTCGGCCGCAACAGTGTCCCAACAGTCCCATGGCCATGCTA

113▶ P K P A P A A S P G V R A G H V L S T S A G N S A P N S P M A M L

1001 CATATCAGCTCCAACCCCGAGAAAGAGTTTGTATGATGTCATTGACAACATTATGCGCCTGGACAGCGTGTGGGCTACATCAACCTGAGATGCAGATGC

147▶ H I S S N P E K E F D D V I D N I M R L D S V L G Y I N P E M Q M

BsrGI (1136)

1101 CTAACACGCTGCCCTGTCTAGCAGCCACCTGAACGTGTACAGCGGTGACCCCGAGTACAGCCTCCATGGTGGGTGTCACCAGCAGCTCCTGCCCTGC

180▶ P N T L P L S S S H L N V Y S G D P Q V T A S M V G V T S S S C P A

BsrBI (1255)
BbsI (1292)

1201 CGACCTGACTCAGAAGCAGAGCTAACAGATGCTGAGAGCAGAGCCCTGGCCAAGGAGCGGCAAGAAGAAACAATCAACCTAATTGAGAGAAGACGC

213▶ D L T Q K R E L T D A E S R A L A K E R Q K K D N H N L I E R R R

BstXI (1352)

1301 AGTTCAACATCAATGACCGGATCAAGGAGCTGGGAATGCTGATCCCCAAGGCCAACGACCTGGACGTGCGTGGAAACAAAGCACCATCCTCAAGGCCT

247▶ R F N I N D R I K E L G M L I P K A N D L D V R W N K G T I L K A

BspEI (1412)
PstI (1432)

1401 CTGTGGATTACATCCGGAGGATGCAGAAGGACCTGCAGAAGTCCCGGAGCTGGAGAACCCTCCCGCGCCTGGAGATGACTAACAAGCAGCTCTGGCT

280▶ S V D Y I R R M Q K D L Q K S R E L E N H S R R L E M T N K Q L W L

ApaLI (1531)

MluI (1527)

1501 CCGCATCCAGGAGCTGGAGATGCAGGCACGCGTGCACGGCCTCCCCACCACCTCGCCGTGGGTGTGAATATGGCCGAGCTGGCCAGCAGGTGGTGAAG

313▶ R I Q E L E M Q A R V H G L P T T S P S G V N M A E L A Q Q V V K

SapI (1678)

1601 CAAGAGTTGCCAGTGGAGATGGCCAGGGGAGGCGCTGATGCTGGGGCCTGAGTCCCTGAGCCTGAGCAAATGCCGGCTTTCCTCCCCAGGCTCCGC

347▶ Q E L P S E D G P G E A L M L G P E V P E P E Q M P A L P P Q A P

Bsp120I (1783)

1701 TGCCCTCGGCCGCCAGCCAGTCTCCGTTCCATCACCTGGACTTACGCTTGGCCTGAGCTTTGGGGTGGGGGACGAGGGGCCACAGGTTACCC

380▶ L P S A A Q P Q S P F H H L D F S H G L S F G G G G D E G P T G Y P

XcmI (1844)

1801 CGATACCCTGGGACAGAGCAGGCTCCCCATTCCCCAACCTGTCCAAGAAGATCTGGACTTAATGCTCCTAGATGACTCCCTGCTCCCCCTGGCCTCT

413▶ D T L G T E H G S P F P N L S K K D L D L M L L D D S L L P L A S

NheI (1991)

1901 GACCCCTCTTTTCTACCATGTCTCCTGAGGCCTCAAAGGCCAGCAGCCGCCGAGCAGCTTACGATGGAGGAGGTGATGTTCTGTGACGCTAGCTGG

447▶ D P L F S T M S P E A S K A S S R R S S F S M E E G D V L •

2001 CCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTAT

HpaI (2129)
MfeI (2140)

2101 TTGTAACCATTATAAGCTGCAATAAACAAAGTTAAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAA

EcoRI (2225)

2201 GTAAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGA

▶ ◀

2301 ATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTCATGGAGTTAAGATATAGTGTATTTTCCAAGTTT

SapI (2407) SspI (2464) SmaI (2478)
 2401 TGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTATGAAAATATTCAGAAATAATTTAAATACATCATTGCAATG
 2501 AAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAAT
 2601 AGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCCTCAATGGTGGTTTTGACCAGCTTGCCATTCAT
 141 • N R T Y K L P I L E E I T T K V L K G N M
 SacI (2739) BstXI (2768)
 2701 CTC AATGAGCACA AAGCAGT CAGGAGCATAGT CAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAG
 119 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 E D S
 2801 TAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTT CAGCAGACAGAGTGACCCTGCCAA
 85 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 V R G I
 2901 TGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTCTCATAGACATGGTGATCTT
 52 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 M T I K
 BbsI (3049) XmnI (3045)
 3001 CTCAGTGGCGACCTCCACCAGTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCTGATTATACTATGCCGATATA
 19 E T A V E V L E L D Q Q S I N F T K M
 AseI (3111) SacI (3168)
 3101 CTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCATAACGAGCTCTGCTTATATAGACCTCCACCCTACA
 SpeI (3266)
 3201 CGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTACGACATTTTGAAAGTCCCGTTGATTTACTAGICAAAACAAACTCCCATTGACGTCAATGG
 SnaBI (3394)
 3301 GGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTA
 NdeI (3499)
 3401 GATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGC
 3501 ATATGATACACTTGATGTACTGCCAAGTGGGCGATTTACCGTAAATACTCCACCATTGACGTCAATGAAAGTCCCTATTGGCGTTACTATGGGAACAT
 PacI (3685) PstI (3678) SdaI (3677) BspLUIII (3695)
 3601 ACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGT CAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTG CAGGTTAATTAAGAACAATG
 3701 TGAGCAAAAGGCCAGCAAAAGCCAGGAACCGTAAAAAGGCCGCTTGGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGAC
 3801 GCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCTTTCCCTGGAAGTCCCTCGTGCCTCTCTGTTCCGACCTGCCGCT
 3901 TACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGTTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAG
 ApaLI (4009)
 4001 CTGGGCTGTGTGCACGAACCCCGTT CAGCCCAGCCGCTGCGCCTTATCCGGTAACTATCGTCTT GAGTCCAACCCGGTAAGACACGACTTATGCCAC
 4101 TGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAAC
 4201 AGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTT
 4301 TTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACTCAC
 PacI (4425) SmaI (4434) NotI (4444)
 4401 GTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGTTTTTGTGT
 4501 GAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCAAGTGAAGTGCAGGTGCCAGAACATTTCC
 4601 TCTATCGAA