



PvuI (7)
SgfI (6)
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGGGGTAAGTGGAAAGTGTGTCTGTACTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCCTACCTGAGGCC

301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

BspHI (560)
AgeI (552)
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCCTACCTGAGATCACCGGTATCATGAACCACTCAGCCCGAGGATTCCCCACCACCCCG

1 M N H S A P G I P P P P R

XcmI (652) **XmnI (681)**
601 CCGTGTGAGGCTGAAGCCCTGGTGGTGGCCAGGTGAACAGCTGCCAGTACCAGGGCTTCACTGGTCAACGGGGAAAAGAACTCTTCTATATACC

13 R V R L K P W L V A Q V N S C Q Y P G L Q W V N G E K K L F Y I P
701 TGGCGCCATGCCACGAGGCATGGTCCAGCCAGGATGGGACAAACCATCTTCAAGCCCTGGGCTAAAGAGACAGGGAAGTACACTGAAGGGGTGGATG

47 W R H A T R H G P S Q D G D N T I F K A W A K E T G K Y T E G V D

BstXI (808)
801 AGGCTGACCCAGCCAAGTGAAGGCCAACCTGCGCTGTGCCCTTAACAAAAGCCGTGACTTCCAGCTGTTCTATGATGGCCCTCGGACATGCCACCTCA

80 E A D P A K W K A N L R C A L N K S R D F Q L F Y D G P R D M P P Q
901 GCCGTACAAGATCTACGAGGCTGCTCCAACGGCCCTGCTCCACAGAGACCAACCCACTGATGATTACGTTCTGGGAGAAGAGGAGGAGGAGAAGAG

113 P Y K I Y E V C S N G P A P T E S Q P T D D Y V L G E E E E E E E

DraIII (1092) **BbsI (1087)** **MscI (1099)**
1001 GAAGAGCTCCAGAGAATGCTACCAGGCCTGAGCATCACAGAGCCTGCGCTACCTGGGCTCCCAACGCACCCTATTCTTACCCAAAGAACCAAGT

147 E E L Q R M L P G L S I T E P A L P G P P N A P Y S L P K E D T K

SmaI (1131)
1101 GGCCACCTGCTCTCCAGCCACCTGTAGGGCTGGGTCCCCCTGTCCAGACCCAAATCTCTGGCCCTCCCTCTGGAAATCTGCTGGCTTCAGGCAGCT

180 W P P A L Q P P V G L G P P V P D P N L L A P P S G N P A G F R Q L

Bsu36I (1204) **BspLU11I (1286)**
1201 TCTCCCTGAGGTCCTGGAGCCTGGACCTCTGGCTTCCAGCCAGCCCTACAGAACCACTCTTGCTGACCTGCTGATCAGCCCCACATGTTGCCCTTTG

213 L P E V L E P G P L A S S Q P P T E P L L P D L L I S P H M L P L
1301 ACGGACTAGAGTCAAGTTCAGTACCGGGGACGCGCACCCCGGACCTCACCATCAGCAACCCACAAGGCTGCAGGCTCTTCTACAGCCAGCTAGAGG

247 T D L E I K F Q Y R G R A P R T L T I S N P Q G C R L F Y S Q L E
1401 CTACCCAGGAGCAAGTGAAGTCTTTGGCCCTGTGACCTGGAGCAAGTGCCTTCCCTAGCCAGGACATCCCCAGTGACAAGCAGCGTTTCTATAC

280 A T Q E Q V E L F G P V T L E Q V R F P S P E D I P S D K Q R F Y T
1501 GAACCAGCTGCTAGATGCTGACCGTGGGCTCATCTGCGAGCTGCAGGGCCAGGACCTGTACGCCATCCGCTGTGCCAGTGAAGGTGTTCTGGAGT

313 N Q L L D V L D R G L I L Q L Q G Q D L Y A I R L C Q C K V F W S

Bsp120I (1600) **NcoI (1617)**
1601 GGGCCCTGCGCCTTGGCCATGGCTCCTGCCCCAACCCATTGAGCGGGAAGTCAAGACGAAGCTCTTAGCCTAGAGCAGTTTCTCAATGAGCTCATCC

347 G P C A L A H G S C P N P I Q R E V K T K L F S L E Q F L N E L I
1701 TGTTCAGAAGGGCCAGACTAATACCCACCACCTTTGAGATCTTCTTTGCTTTGGAGAAGAATGGCTGATGTCAAACCCCGAGAGAAGAAGCTCAT

380 L F Q K G Q T N T P P P F E I F F C F G E E W P D V K P R E K K L I

Acc65I (1812)
BsrGI (1803)
1801 TACTGTACAGGTGTACCTGTTGACGCCGGTGTGCTGAGATGTTCTCAGGGGAGCTTTCTGGTGGCAGACAGCATCCGACTGCAGATCTCAAAC

413 T V Q V V P V A A R L L L E M F S G E L S W S A D S I R L Q I S N

BstAPI (1962) **NcoI (1976)**
1901 CCGGATCTCAAAGACCACATGGTAGAGCAGTTAAAGAGCTTATCACCTCTGGCAGTCCCAGCAGCAATTGCAGCCCATGGTCCAGGCCCTCTGTGG

447 P D L K D H M V E Q F K E L H H L W Q S Q Q Q L Q P M V Q A P P V

Bsp120I (2020) **SphI (2045)** **NheI (2079)** **MscI (2085)**
2001 CAGGCCTCGATGCAAGCCAGGGCCCTGGCCATGCACCCAGTTGGCATGCAATAATGAGGCTACAGATAGTGCTGCCGCTAGCTAGCCAGACATGATA

480 A G L D A S Q G P W P M H P V G M Q •

2101 AGATACATTGATGAGTTTGGACAAACCACAAGTGAAGTGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTA

HpaI (2217)
2201 TAAGTGCATAAACAAGTTAACAACAACAATTGCATTCAATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTA

EcoRI (2313)
2301 CAAATGTGGTATGGAAATCTAAATAACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGATGAATAAGGCATAGG

2401 CATCAGGGCTGTGGCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTGCTCT

SspI (2552) **SwaI (2566)**
2501 TCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTT

2601 TTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACA

2701 GCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTTCATCTCAATGAGCAC
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
BstXI (2856)
2801 AAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTG
115 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 Y P H R
2901 ACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAA
81 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 Y A E I
3001 TGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCGACATGGTGTCTGTGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGAC
48 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
BbsI (3137)
XmnI (3133) AseI (3199)
3101 CTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGA
15 E V L E L D Q Q S I N F T K M
3201 TTAATTGTCAAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCC
SpeI (3354)
3301 ATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTG
SnaBI (3482)
3401 GAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCA
NdeI (3587)
3501 AGTAGGAAAGTCCATAAGGTCAATGTAAGTGGGCATAATGCCAGGCGGGCCATTACCCTGATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACT
3601 TGATGTAAGTCCAAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTG
PacI (3773) SdaI (3765) BspLU11I (3783)
3701 ACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCCTAAGTTATGTAACGCTGCAGGTTAAATTAAGAACATGTGAGCAAAAGGC
3801 CAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGA
3901 GGTGGCGAAACCCGACAGGACTATAAGATAACCAGGCGTTTTCCCTGGAAAGTCCCTCGTGGCTCTCTGTTCCGACCCTGCCGTTACCGGATACCT
ApaLI (4097)
4001 GTCCGCCTTTCTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCTGGGCTGTGTG
4101 CACGAACCCCGTTCCAGCCGACCGTGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCA
4201 CTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTAT
4301 CTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAG
4401 CAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTT
EagI (4533)
PacI (4513) SmaI (4522) NotI (4532)
4501 TGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTA
4601 ACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA