



100

PvuI (7)
SgfI (6) 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA MfeI (82)

101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGTGTCGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCTTACACGGCCCGCCGCCCTACCTGAGGCC PvuII (239)

301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NaeI (441) 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACCGGTAGGAGGGCCACCATGGAGCCTCTCCGGTGTCTATCTTACTC AgeI (552) NcoI (568)
1 M E P L R L L I L L

BspEI (615) 601 TTTGTACAGAGCTGTCGGAGCCACAACACCACAGTGTCCAGGGCGTGGCGGGCCAGTCCCTGCAGGTGTCTTGCCTATGACTCCATGAAGCACT SdaI (662)
11 F V T E L S G A H N T T V F Q G V A G Q S L Q V S C P Y D S M K H

StuI (712) 701 GGGGAGGCGCAAGCCTGGTGCGCCAGCTGGGAGAGAAGGGCCCATGCCAGCGTGTGGTACGACACCAACTTGTGGCTGCTGCTTCCCTGAGGAG Bsp120I (740)
44 W G R R K A W C R Q L G E K G P C Q R V V S T H N L W L L S F L R R

801 GTGGAATGGGAGCACAGCCATCACAGACGATACCTGGTGGCTCTCACCATTACGCTGGGAATCTACAACCCATGATCGGGTCTTACCAGTGC
77 W N G S T A I T D D T L G G T L T I T L R N L Q P H D A G L Y Q C

NcoI (908) 901 CAGAGCCTCCATGGCAGTGGGCTGACACCCTCAGGAAGTCTGGTGGAGGTGCTGGCAGACCCCTGGATCACCGGGATGCTGGAGATCTCTGGTTCC BglII (986) XmaI (999)
111 Q S L H G S E A D T L R K V L V E V L A D P L D H R D A G D L W F

1001 CCGGGAGTCTGAGAGCTTCGAGGATGCCATGTGGAGCACAGCATCTCCAGGAGCCTTTGGAAGGAGAAATCCCTTCCACCCACTTCCATCCTTCT
144 P G E S E S F E D A H V E H S I S R S L L E G E I P F P P T S I L L

BstXI (1192)
DraIII (1189) 1101 CCTCTGGCTGCATCTTCTCATCAAGATTCTAGCAGCCAGCGCCCTCTGGGCTGCAGCCTGGCATGGACAGAAGCCAGGGACACATCCACCCAGTAA
177 L L A C I F L I K I L A A S A L W A A A W H G Q K P G T H P P S E

MscI (1208) 1201 CTGGACTGTGGCCATGACCCAGGTATCAGCTCCTCAAACTCTGCCAGGGCTGAGAGACAGTGAAGGAAGATGATGGGAGGAAAAGCCAGGAGAAGTCCC BbrPI (1256)
211 L D C G H D P G Y Q L Q T L P G L R D T •

MscI (1320)
NheI (1314) 1301 ACCAGGGACAGCCGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAAACCACAACCTAGAATGCAGTAAAAAATGCTTTATTTGTGA

HpaI (1452) MfeI (1463) 1401 AATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTATTTATGTTTCAGGTTTCAGGGGGAG

EcoRI (1548) 1501 GTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAAATCTAAATAACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTAC
1601 TTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAG

SspI (1787) 1701 ATATAGTGTATTTTCCCAAGTTTGAAGTACTGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATCCCTTTTATGAAAAATATTCAGAAAT

SwaI (1801) 1801 AATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACT

1901 TAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGCTGTAAGTGGGGGATGAGTTCCTCAATGGTG
141 • N R T Y K L P I L E E I T

SacI (2062) 2001 GTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGTCACATGCCACAGGGGCTGACCCCTGA BstXI (2091)
126 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 V R I

2101 TGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTC
93 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 I A E

StuI (2226) 2201 AGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCACTTGGTCTGATGGCCGCCCGACATGGTCTTGTG
60 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 H K N

BspHI (2376)
XmnI (2368) 2301 TCCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAG
26 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

AseI (2434) 2401 TCGTATTACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTATCTGACGGTTCACATAAACGAGCTCTG SacI (2491)

2500 CTTATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCC GTT GATTTA **SpeI (2589)**
2599 AACAAACTCCCATTTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCA

SnaBI (2717)
2699 TGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATT

NdeI (2822)
2799 GACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTC
2899 CCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAAGTTATGTAA

SdaI (3000) PacI (3008) BspLU11I (3018)
2999 CGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCC
3097 CCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGT
3197 GCGCTCTCCTGTTCCGACCTGCCGTTACCGGATACCTGTCCGCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTC

ApaLI (3332)
3297 AGTTCGGTGTAGGTGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTGAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCA
3397 ACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTG
3497 GCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAA
3597 CAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGT

EagI (3768)
3697 CTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTC
PacI (3748) SmaI (3757) NotI (3767)

3796 ATTACATCTGTGTGTTGGTTTTTTGTTGTAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCC
3896 AGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA