



PvuI (7)
SgfI (6) 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCGCTACCTGAGGGC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTGTTTCGTTT

BstEII (555)
AgeI (552) **NcoI (560)** 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTACCATGGCAGACAGCTTTTCGCTTAACGATGCCTTAGCTGG

1 M A D S F S L N D A L A G

EcoRV (623)
601 CTCTGAAACCCAAACCTCAAGGATATCCGGGTGCATGGGGGAACAGCCTGGGGCAGGGGCTACCCAGGGGCTTATCCTGGGCCTACCCAGGA

13 S G N P N P Q G Y P G A W G N Q P G A G G Y P G A A Y P G A Y P G

701 CAAGCTCTCCAGGGGCTACCCAGGACAGGCTCCTCAGGGGCTACCCAGGACAGGCTCCTCTAGTGCCTACCCGCGCCAACTGCCCTGGAGCTT

47 Q A P P G A Y P G Q A P P G A Y P G Q A P P S A Y P G P T A P G A

801 ATCCTGGCCAACTGCCCTGGAGCTTATCCTGGCTCAACTGCCCTGGAGCCTCCAGGGCAACCTGGGGCACCTGGGGCTACCCAGTCTCCTGG

80 Y P G P T A P G A Y P G S T A P G A F P G Q P G A P G A Y P S A P G

BsaBI (996)
SphI (989) 901 AGGCTATCCTGCTGCTGGCCCTTATGGTGTCCCGCTGGACCACTGACGGTGCCTATGACCTGCCCTTGCTGGAGGAGTCATGCCCCGATGCTGATC

113 G Y P A A G P Y G V P A G P L T V P Y D L P L P G G V M P R M L I

XbaI (1041)
1001 ACAATCATGGGCACAGTGAACCCAACGCAACAGGATTGTTCTAGATTTCCAGGAGAGGAATGATGTTGCCTTCCACTTTAACCCCGCTTCAATGAGA

147 T I M G T V K P N A N R I V L D F R R G N D V A F H F N P R F N E

1101 ACAACAGGAGAGTCATTGTGTAAACACGAAGCAGGACAATAACTGGGAAAGGAAGAAAGACAGTCAGCCTTCCCTTTGAGAGTGGCAAACCAATTCAA

180 N N R R V I V C N T K Q D N N W G K E E R Q S A F P F E S G K P F K

PstI (1258)
1201 AATACAAGTCTGTTGAAGCTGACCACTTCAAGGTTGCGGTCAACGATGCTCACCTACTGCAGTACAACCATCGGATGAAGAACCTCCGGGAAATCAGC

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

MscI (1374)
Eco47III (1333) **NheI (1368)** 1301 CAACTGGGGATCAGTGGTGACATAACCTCACCAGCGCTAACCACGCCATGATCTAAGCCAGAAGGGCGCTAGCTGGCCAGACATGATAAGATACATTGA

247 Q L G I S G D I T L T S A N H A M I •

1401 TGAGTTTGACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAAT

HpaI (1506) **MfeI (1517)** 1501 AAACAAGTTAACAACAACAAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTA

EcoRI (1602)
1601 TGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCT

SapI (1784) 1701 GTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTATGAGTAAAGATATAGTGTATTTTCCCAAGTTTGAAGTACTGCTTTCATTTCTTTA

SspI (1841) **SwaI (1855)** 1801 TGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAAATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAATGTTTTTATTAGGC

1901 AGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGGAACCTTAATAGAAATTGGACAGCAAGAAAGCG

2001 AGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAGCAGTCAG

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 F C D P

SacI (2116) **BstXI (2145)** 2101 GAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAAT

111 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 V A V I

StuI (2280) 2201 GGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCCAGCAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCA

78 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 H V A

2301 GAGATGATCTCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTGTTGCTCCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCT

44 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 E V L E

BbsI (2426)
XmnI (2422) **AseI (2488)**
 2401 CCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAA
 11 L D Q Q S I N F T K M

2501 AACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAA
 SacI (2545)

2601 TGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGTGGAGACTTGAAATCCCCGT
 SpeI (2643)

2701 GAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGT
 SnaBI (2771)

2801 CCCATAAGGTCATGTAAGTGGCATAATGCCAGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTAAGTGC
 NdeI (2876)

2901 CAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGG

3001 CGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATAAGAACAATGTGAGCAAAAGGCCAGCAAAAGGC
 PacI (3062)
 PstI (3055)
 SdaI (3054) BspLU11I (3072)

3101 CAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAAC

3201 CCGACAGGACTATAAAGATACCAGGCGTTTCCCTGGAAAGTCCCTCGTGGCTCTCTGTTCCGACCTGCCGTTACCGGATACCTGTCCGCCTTTC

3301 TCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCC
 ApaLI (3386)

3401 CGTTCAGCCCAGCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGG

3501 ATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGC

3601 TGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTGTGTTGCAAGCAGCAGATTAC

3701 GCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCT

3801 AGTTAATTAACATTTAAATCAGCGGCCCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTAACATACGCTCT
 EagI (3822)
 PacI (3802) SmaI (3811) NotI (3821)

3901 CCATCAAACAAACGAAACAAACAAACTAGCAAATAGGCTGTCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA