



PvuI (7)
SgfI (6) 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
MfeI (82) EcoNI (96)

101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) HindIII (245) **Bsu36I (291)**
PvuII (239) EcoNI (287)

201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC

301 GCCATCCACGCGGTTGAGTGCCTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

BspHI (560)
AgeI (552)

501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTCATCATGAGATTGGCAGTGATTTGCTTTTGCCTGTTTGGCAT
1 M R L A V I C F C L F G I

HindIII (649) **BstXI (680)**

601 TGCCTCCTCCCTCCCGGTGAAAGTGACTGATTCTGGCAGCTCAGAGGAGAAGCTTTACAGCCTGCACCCAGATCCTATAGCCACATGGCTGGTGCCTGAC
13 A S S L P V K V T D S G S S E E K L Y S L H P D P I A A T W L V P D

XmnI (772)

701 CCATCTCAGAAGCAGAATCTCCTTGCGCCACAGAATGCTGTGCTCTGAAGAAAAGGATGACTTTAAGCAAGAACTTTCCAAGCAATCCAATGAAA
47 P S Q K Q N L L A P Q N A V S S E E K D D F K Q E T L P S N S N E

801 GCCATGACCACATGGACGACGATGATGACGATGATGACGATGAGACCATGCAGAGAGCGAGGATTCTGTGGACTGGATGAATCTGACGAAATCTCA
80 S H D H M D D D D D D D D D D G D H A E S E D S V D S D E S D E S H

EagI (987)

901 CCATTCGGATGAGTCTGATGAGACCGTCACTGCTAGTACACAAGCAGACACTTCACTCCAATCGTCCCTACAGTCGATGTCCCAACGGCCGAGGTGAT
113 H S D E S D E T V T A S T Q A D T F T P I V P T V D V P N G R G D

BsrBI (1098)

PshAI (1013) EcoO109I (1076) **SapI (1095)**

1001 AGCTTGGCTTATGGACTGAGGTCAAAGTCTAGGAGTTTCCAGGTTTCTGATGAACAGTATCCTGATGCCACAGATGAGGACCTCACCTCTCACATGAAGA
147 S L A Y G L R S K S R S F Q V S D E Q Y P D A T D E D L T S H M K

SphI (1151)

1101 GCGGTGAGTCTAAGGAGTCCCTCGATGTCATCCCTGTTGCCAGCTTCTGAGCATGCCCTCTGATCAGGACAACAACGGAAAGGGCAGCCATGAGTCAAG
180 S G E S K E S L D V I P V A Q L L S M P S D Q D N N G K G S H E S S

PvuII (1201) **ClaI (1282)**

1201 TCAGCTGGATGAACCAAGTCTGGAACACACAGACTTGAAGCATTCAAAGAGAGCCAGGAGAGTGCCGATCAGTCGGATGTGATCGATAGTCAAGCAAGT
213 Q L D E P S L E T H R L E H S K E S Q E S A D Q S D V I D S Q A S

XcmI (1301) **BsaBI (1384)**

1301 TCCAAAGCCAGCCTGGAACATCAGAGCCACAAGTTTACAGCCACAAGGACAAGCTAGTCTAGACCCTAAGAGTAAGGAAGATGATAGGTATCTGAAAT
247 S K A S L E H Q S H K F H S H K D K L V L D P K S K E D D R Y L K

BspHI (1410) **NheI (1480)**

1401 TCCGAATTTCTCATGAATTAGAGAGTTCATCTTCTGAGGTCAACTAAAGAAGAGGCAAAAACACAGTTCCTTACTTTGCGACTAGCTGGCCAGACATGAT
280 F R I S H E L E S S S S E V N •

1501 AAGATACATTGATGAGTTTGGACAAACCAACATAAGTGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATT

HpaI (1618) MfeI (1629)

1601 ATAAGCTGCAATAAACAAGTTAAACAACAACAATTGCATTCAATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTAAAGCAAGTAAACCTCT

EcoRI (1714)

1701 ACAAATGTGGTATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAG

SapI (1896)

1801 GCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTATGAGGTTTAAAGATATAGTGTATTTTCCAAGTTTGAAGTACAGCTC

SspI (1953) SwaI (1967)

1901 TTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGT

EcoO109I (2028)

2001 TTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAGGAACCTTTAATAGAAATGGAC

2101 AGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCA
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

SacI (2228) **BstXI (2257)**

2201 CAAAGCAGTCAGGAGCATAGTCAAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCT
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

StuI (2392)

2301 GACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCCAGCACAGACAGTACCCTGCCAATGTAGGCCTCA
82 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

2401 ATGTGGACAGCAGAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCCGACATGGTGTCTGTGCTCATAGAGCATGGTATCTTCTCAGTGGCGA
48 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 E T A V

BbsI (2538)

XmnI (2534)

2501 CCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATG
 15 E V L E L D Q Q S I N F T K M

AseI (2600) **SacI (2657)**

2601 ATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCC

SpeI (2755)

2701 CATTTCGCTCAATGGGGCGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAACTCCCATGACGTCAATGGGGTGGAGACTT

SnaBI (2883)

2801 GGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCC

NdeI (2988)

2901 AAGTAGGAAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACAC

3001 TTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCTATTGGCGTTACTATGGGAACATACGTCAATTATT

PacI (3174)

PstI (3167) **BspLU11I (3184)**

SdaI (3166)

3101 GACGTCAATGGGCGGGGTCTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAAGTTATGTAACGCTGAGGTTAAATAAGAACATGTGAGCAAAAGG
 CCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAG

3201

3301 AGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCGTGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACC

ApaLI (3498)

3401 TGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCCGGTGTAGGTGTTGCTCCAAGCTGGGCTGTGT

3501 GCACGAACCCCCGTTGAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCC

3601 ACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTA

3701 TCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTGTTTGCAA

3801 GCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATT

EagI (3934)

PacI (3914) **SwaI (3923)** **NotI (3933)**

3901 TTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACT

4001 AACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA