



100

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

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441)
NaeI (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560)
BstEII (555)
KasI (535) **AgeI (552)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACCGGTACCATGGTGCAGGAAAGACAATCCCAAGGGAAGGGAGTCTG
1 M V Q E R Q S Q G K G V C

PshAI (611)
601 CTGGACCTGAGACTCTGGTCAGCTGCTGTGATTTCCATGTTACTCTTGTGAGTACCTGTTTCATTGCGAGCTGTGTGGTACTTACCAATTTATTATGGAC
13 W T L R L W S A A V I S M L L L S T C F I A S C V V T Y Q F I M D

701 CAGCCAGTAGAAGACTATATGAACTTACACATACCATTCCAGTCTCACCTGCTTCAAGTGAAGGGACTATGGTGTGAGAAAAATGTGGGATGCTGCC **BstXI (799)**
47 Q P S R R L Y E L H T Y H S S L T C F S E G T M V S E K M W G C C

801 CAAATCACTGGAAGTCATTTGGCTCCAGCTGCTACCTCATTTTACCAAGGAGAACTTCTGGAGCACCAGTGAGCAGAAGTGTGTTCCAGATGGGGCTCA
80 P N H W K S F G S S C Y L I S T K E N F W S T S E Q N C V Q M G A H

901 TCTGGTGGTATCAATACTGAAGCGGAGCAGAATTTATCACCAGCAGCTGAATGAGTCACTTTCTTACTTCTGGTCTTTCCGATCCACAAGGTAAT
113 L V V I N T E A E Q N F I T Q Q L N E S L S Y F L G L S D P Q G N

ClaI (1015) **BsrBI (1081)**
1001 GGCAATGGCAATGGATGATGATACTCCTTTCCAGTCAAATGTGAGTCTGGCACCCCATGAACCAATCTTCCAGAAGAGCGGTGTGTTTCAATAG
147 G K W Q W I D D T P F S Q N V R F W H P H E P N L P E E R C V S I

BstBI (1113)
AsuII (1113)
1101 TTTACTGGAATCCTTCCGAAATGGGGCTGGAATGATGTTTTCTGTGATAGTAAACACAATTCATATGTGAAATGAAGAAGATTTACCTATGAGTGCCTGT
180 V Y W N P S K W G W N D V F C D S K H N S I C E M K K I Y L •

MscI (1214)
NheI (1208)
1201 TATTCATTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTG

HpaI (1346) MfeI (1357)
1301 TGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCTTTATGTTTCAGGTTTCAGGGGAGGTGTGG

EcoRI (1442)
1401 GAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAAT

1501 CCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTCATGGAGTTAAGATATAG

SspI (1681) SwaI (1695)
1601 TGTATTTTCCAAGGTTTGAAGTACTCTTCTTTCTTTATGTTTTAAATGACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAATAATTTA

EcoO109I (1756)
1701 AATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGA

1801 ACAAAGGAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTG
141 • N R T Y K L P I L E E I T T K

SacI (1956) **BstXI (1985)**
1901 ACCAGCTTGCATTTCATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGTCTCTGCACATGCCACAGGGGCTGACCCTCATGGTGGTGC
124 V L K G N M E I L V F C D P A Y D S I L E R V E R C M G C P S V V R I S R

2001 TGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACA
91 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 A C

StuI (2120)
Eco147I (2120)
2101 GACAGTGACCTGCCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTTGTGCTCTCA
58 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 D E

BspHI (2270)
XmnI (2262)
2201 TAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAAGTGTAT
24 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

VspI (2328)
AseI (2328) **SacI (2385)**
2301 TATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAAACGAGCTGCTTATAT

2401 AGACCTCCACCGTACACGCCTACCGCCATTTCGCTCAATGGGGCGGAGTTGTTACGACATTTGGAAAAGTCCCGTTGATTTACTAGTCAAAAACAAAC SpeI (2483)
2500 TCCCATTTGACGTCAATGGGGTGGAGACTTGAAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAAT
SnaBI (2611)
Eco105I (2611)
2600 AGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCA
NdeI (2716)
2700 ATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAAGTCCCTATTG
PstI (2895)
SdaI (2894)
2800 GCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGGTTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCCTAAGTTATGTAACGCCCTG
PciI (2912)
PacI (2902) BspLU11I (2912)
2899 CAGGTTAA TTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGA
2998 CGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCGCTCT
3098 CCTGTTCCGACCCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGG
ApaLI (3226)
3198 TGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGT
3298 AAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAAC
3398 TACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCA
3498 CCGCTGGTAGCGGTGTTTTTTTGTTCGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGC
EagI (3662)
PacI (3642) SmaI (3651) NotI (3661)
3598 TCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCAATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATTACATC
3698 TGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAAACAAAACAACTAGCAAAATAGGCTGTCCCCAGTGCAAG
3798 TGCAGGTGCCAGAACATTTCTCTATCGAA