



100

PvuI (7)
SgfI (6)
MfeI (82) **EcoNI (96)**

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
HindIII (245) **EcoNI (287)**

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCCGCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCCTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441) **NaeI (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560) **BstEII (555)**

501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGGCTACTCTGAGATCACCGGTCACCATGGCCAGGCCATCTGTGGATCTGGTTCCTTTGCCT
1▶ M A Q R H L W I W F L C L

SspI (685)

601 ACAAACCTGGTCTGAAGCAGCAGGAAAAGATGCAGACCCGATGGTAATGAATGGGATTCTTGGGAGTCAGTTACTTTCTCTTAAATATTCAAGAACCA
 13▶ Q T W S E A A G K D A D P M V M N G I L G E S V T F L L N I Q E P
 701 AAGAAAATTGACAACATTGCCTGGACTTCTCAATCATCTGTTGCTTTTATAAAACCAGGAGTCAATAAAGCTGAAGTTACCATAACCCAGGGCACTTATA
 47▶ K K I D N I A W T S Q S S V A F I K P G V N K A E V T I T Q G T Y

Tth11I (832)

801 AAGGACGAATAGAAATCATAGATCAGAAGTATGACCTGGTCTATTAGAGACCTGAGGATGGAAGATGCAGGAACCTACAAAGCAGACATCAATGAAGAGAA
 80▶ K G R I E I I D Q K Y D L V I R D L R M E D A G T Y K A D I N E E N

BglIII (917) **Sall (941)**
EcoRV (975) **Eco32I (975)**

901 TGAGGAAACCATCAACCAAGATCTACTACCTTATATCTACCGTCGACTTAAAAACCAAAAAATTACACAGAGTTTGATATCATCTTTGAACAATACCTGT
 113▶ E E T I T K I Y Y L H I Y R R L K T P K I T Q S L I S S L N N T C
 1001 AATATCACACTGACATGCTCTGTGAAAAGGAAAAGGATGTCACATATAGCTGGAGTCCCTTTGGAGAGAAAAGCAATGTCCTTCAAATCGTCCACT
 147▶ N I T L T C S V E K E E K D V T Y S W S P F G E K S N V L Q I V H

NcoI (1103) **BspLU11I (1126)**
Tth11I (1162)

1101 CCCCATGGACAAAAAATGACCTACACATGTACAGCCGAGAACCCTGTGACGAAACAGTTCTGACTCTGTCACTGTCCAGCAGCCATGTACAGACACTCC
 180▶ S P M D Q K L T Y T C T A Q N P V S N S S D S V T V Q Q P C T D T P
 HindIII (1200)

1201 AAGCTTCCATCCTCGCCATGCTGTGTTGCCAGGAGGATTGGCCGTGCTCTTTCTGCTTATTCTCATTCCGATGTTGGCATTCTGTTCCGTTTGTACAAG
 213▶ S F H P R H A V L P G G L A V L F L L I L I P M L A F L F R L Y K
 1301 AGAAGCGGAGACAGGATTGCTGGAAGCAGATGATGTCTCAAAGAAAACAGTATATGCTGTAGTTTCAAGAAATGCTCAACCCACAGAGTCCAGAATCT
 247▶ R R R D R I V L E A D D V S K K T V Y A V V S R N A Q P T E S R I
 1401 ATGATGAAATCCCTCAGTCCAAGATGCTGTCTGTAAGGAAAGTCAAGTACCACCATTTCTCAGTGCAGCTTTCTGAGAAGATGAAGGAAACCAA
 280▶ Y D E I P Q S K M L S C K E D P V T T I Y S S V Q L S E K M K E T N

PshAI (1507)
MscI (1586) **NheI (1580)**

1501 CATGAAGGACAGAAGTCTGCCTAAGGCTTTGGGTAATGAAATTGTTGTCTAGGTGATTCTCTAAGACCACGAAGGACACAGCTAGCTGGCCAGACATGAT
 313▶ M K D R S L P K A L G N E I V V •
 1601 AAGATACATTGATGAGTTTGGACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATT

HpaI (1718) **MfeI (1729)**

1701 ATAAGCTGCAATAAACAAGTTAAACAACAACATTGCATTCTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAACCTCT

EcoRI (1814)

1801 ACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAG
 1901 GCATCAGGGGCTGTTGCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGTTTGAAGTAGCTC

SspI (2053) **Swal (2067)**

2001 TTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTATAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAAATAATGT

EcoO109I (2128)

2101 TTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTGTAGTGTGGACTTAGGGAACAAGGAACCTTTAATAGAATTGGAC

SacI (2328) **BstXI (2357)**

2201 AGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCA
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

StuI (2492) **Eco147I (2492)**

2301 CAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCT
 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
 2401 GACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCCTCA
 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

2501 ATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCCTGATGGCCGCCCGACATGGTGCTTGTGTCCATAGAGCATGGTGATCTTCTCAGTGGCGA
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
BspHI (2642)
2601 CCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATG
15 I E V L E L D Q Q S I N F T K M
VspI (2700) SacI (2757)
2701 ATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGC
AseI (2700)
2800 CCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGAC
SpeI (2855)
2899 TTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTG
SnaBI (2983) Eco105I (2983)
2999 CCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATAC
NdeI (3088)
3099 ACTTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTA
PstI (3267) SdaI (3266) PacI (3274) BspLU11I (3284)
3199 TTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTG C A G G T T A A T T A A G A A C A T G T G A C A A
3297 AAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAG
3397 TCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCCTGGAAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGCTTACCGGA
3497 TACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCTGGGCT
ApaLI (3598)
3597 GTGTGCACGAACCCCGTTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGC
3697 AGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTT
3797 GGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTGT
3897 GCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGCTGACGCTCAGTGGAACGAAAACTCACGTTAAGG
EagI (4034)
3997 GATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGTTTTTTGTGTAATCGT
PacI (4014) SmaI (4023) NotI (4033)
4097 AACTAACATACGCTCTCCATCAAACAAACGAAACAAACAAACTAGCAAATAGGCTGTCCCAAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCG
4197 AA