



100

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

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCGCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NgoMI (441)
NaeI (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCTACCTGAGATCACCGGTACCCATGGTCGTCCTCTTTGCTTATGCGTCTTGCTGTGGGA
 13▶ M V V L L C L C V L L W E

NdeI (645) **Bst1107I (670)**

601 AGAGGCTCACGGATGGGATTCAAGAACGGGATCTTTCACTAATCCATATGGCTTGAACAAGCAGCGGGCGTATACCACAGAGAAGCTCGGGCTGGCAGA
 13▶ E A H G W G F K N G I F H N S I W L E Q A A G V Y H R E A R A G R
 701 TACAAGCTCACCTACGCCAAGCAAGCCGATGTGAATTTGAAGGTGGTCTGCTCGCAACCTACAAGCAGCTAGAGGCAGCCAGAAAAATTGGATTCC
 47▶ Y K L T Y A E A K A V C E F E G G R L A T Y K Q L E A A R K I G F

MscI (821)
Bsp120I (859) **ClaI (892)**

801 ATGCTGTGCTGCTGGATGGCAAGGTTAGAGTCGGATACCCATTGTGAAACCTGGGCCAACCTGTGGATTTGGGAAAACGGGTATCATCGATTA
 80▶ H V C A A G W M A K G R V G Y P I V K P G P N C G F G K T G I I D Y
 901 TGGATCCGGCTCAACAGGAGTGAGCGATGGGATGCCTATTGTACAACCCACATGCAAAGGAGTGTGGTGGTGTCTTACAGATCCGAAGCGAATTTTT
 113▶ G I R L N R S E R W D A Y C Y N P H A K E C G G V F T D P K R I F

XmaI (1005)
SmaI (1005)
EcoRI (1076)

1001 AAATCCCCGGGCTTCCCAAATGAGTACGATGACAACAGGCTGCTACTGGCACATTCGGCTCAAGTACGGTCAGCGAATTCACCTGAGCTTTTTGGACT
 147▶ K S P G F P N E Y D D N Q V C Y W H I R L K Y G Q R I H L S F L D
 1101 TTGACCTTGAACATGATCCAGGCTGCTGGCTGACTATGTAGAAATCTATGACAGTTATGATGACGTCACCGCTTTGTAGGAAGATACTGTGGTGATGA
 180▶ F D L E H D P G C L A D Y V E I Y D S Y D D V H G F V G R Y C G D E

Ppu10I (1256)
NsiI (1256)

1201 ACTTCCAGAAGACATCATTAGCAGGAAATGTATGACCTTGAAGTTTCTGAGTGATGCATCCGTACAGGCTGGAGGCTTCCAGATTAATACGTCACA
 213▶ L P E D I I S T G N V M T L K F L S D A S V T A G G F Q I K Y V T

BamHI (1302)
ScaI (1339)

1301 GTGGATCCTGCATCTAAATCCAGTCAAGCCAAAAATACAAGTACTACTGAAATAAGAAGTCTTACCTGGAAGGTTTAGCCATCTATAAAAAATTTTTT
 247▶ V D P A S K S S Q A K N T S T T G N K K F L P G R F S H L •

MscI (1434)
NheI (1428)

1401 TTA AAAATGTTCAAACATCCAGTACAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAAA

HpaI (1566) **MfeI (1577)**

1501 TGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAACAAACAATTGCATTCATTTTATGTTTC

EcoRI (1662)

1601 AGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCA
 1701 AATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGAGCCTCACCTTCTT

1801 TCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTCTTCAATTTCTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTATGTA

SspI (1901) **SwaI (1915)**
EcoO109I (1976)

1901 AAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGT
 2001 TTAGTAGTTGGACTTAGGGAACAAAGAACCTTAAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGA
 141▶ • N R T Y K L P I L

SacI (2176)

2101 GTTCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAAGGATAGTCAAGATGAGCTCTCTGCACATGCCACAGGG
 131▶ E E I T 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

BstXI (2205)

2201 GCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCA
 98▶ S V V R I 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

StuI (2340)
Eco147I (2340)

2301 ATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGGA
 64▶ I A I A E 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

BspHI (2490)

2401 CATGGTGTCTGTTGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTCATGATGGC
31 H H K N 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 ←

XmnI (2482)

VspI (2548)
AseI (2548)

2501 CCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCAC
←

SacI (2605)

2601 TAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAAGTCCCGTTGA
←

SpeI (2703)

2701 TTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAAATCCCGTGAGTCAAACCGTATCCACGCCATTGATGTACTGCCAA
←

SnaBI (2831)
Eco105I (2831)

2800 AACCCGATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTCCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCC
←

NdeI (2936)

2900 ATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCATAACTCCACCCATTGACG
←

3000 TCAATGAAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGGGGGGTCTTGGGCGTCCAGCCAGGCGGGCCATTACC
←

PstI (3115)
SdaI (3114) PacI (3122) BspLU11I (3132)

3100 GTAAGTTATGTAACGCCCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTC
←

3198 CATAGGCTCCGCCCCCTGACGAGCATCAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTG
←

3298 GAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCAG
←

ApaLI (3446)

3398 CTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCGACCGCTGCGCTTATCCGGTAACTAT
←

3498 CGTCTTGAGTCCAACCCGGTAAGACACGACTTATGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGT
←

3598 TCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTC
←

3698 TTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATC
←

EagI (3882)
PacI (3862) SmaI (3871) NotI (3881)

3798 TTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAAT
←

3898 ATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAA
3998 TAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA