



PvuI (7)
SgfI (6)
EcoNI (96)

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACACGCCGCCGCCCTACCTGAGGCC
 301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCCTCCCGCCTGTGGTGCTCTGAACTGCGTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441)
NaeI (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

KasI (535)
AgeI (552)
NcoI (560)
BstEII (555)
StuI (597)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCCCATGGAGAGTAAATACAAGGAGATACTCTTGCTAACAGG
 1▶ M E S K Y K E I L L L T G
 SspI (661)

601 CCTGGATAACATCACTGATGAGGAACTGGATAGGTTTAAAGTCTTTTCTTTCAGACGAGTTTAAATATTGCCACAGGCAAACCTACATACTGCAAACAGAATA
 13▶ L D N I T D E E L D R F K F F L S D E F N I A T G K L H T A N R I
 701 CAAGTAGCTACCTTATGATTCAAATGCTGGGCGGTGTCTGCAGTGAAGACCATTCGTATTTTTCAGAAGTTGAATTATATGCTTTTGGCAAAAC
 47▶ Q V A T L M I Q N A G A V S A V M K T I R I F Q K L N Y M L L A K
 801 GTCTTCAGGAGGAGAAGGAGAAAGTTGATAAGCAATACAAATCGGTAACAAAACCAAGCCACTAAGTCAAGCTGAAATGAGTCTGCTGCATCTGCAGC
 80▶ R L Q E E K E K V D K Q Y K S V T K P K P L S Q A E M S P A A S A A
 901 CATCAGAAATGATGTCGCAAGCAACGTGCTGCACAAAAGTCTCTCCTCATGTTAAGCTGAACAGAAAACAGATGGTGGCCAGCAGGAATCTATCAGA
 113▶ I R N D V A K Q R A A P K V S P H V K P E Q K Q M V A Q Q E S I R

Eco47III (1013)
AfeI (1013)

1001 GAAGGGTTTCAGAAGCGCTGTTTCCAGTTATGGTACTGAAAGCAAAGAAGCCCTTACGTTTGGAGACCAAGAAGGCAAGCAGGAGATGTTTCATGCTA
 147▶ E G F Q K R C L P V M V L K A K K P F T F E T Q E G K Q E M F H A

EcoRI (1117)

1101 CAGTGGCTACAGAAAAGGAATTCCTTTGTAAGGTTTAAATACACTGCTGAAAGATAAATTCATTCAAAGAGAATAATTATAATAGCAAGATATTA
 180▶ T V A T E K E F F F V K V F N T L L K D K F I P K R I I I I A R Y Y

Eco72I (1235)
BbrPI (1235)

1201 TCGGCACAGTGGTTTCTTAGAGGTAAATAGCGCCTCACGTGTGTAGATGCTGAATCTGACCAAAAAGGTTAATGTCCCCTGAACATTATCAGAAAAGCT
 213▶ R H S G F L E V N S A S R V L D A E S D Q K V N V P L N I I R K A
 1301 GGTGAAACCCGAAGATCAACACGCTTCAAACCTCAGCCCTTGGAAACAATTGTGAATGGTTTGTGTAGTCCAGAAGGTAACAGAAAAGAAGAAAAACA
 247▶ G E T P K I N T L Q T Q P L G T I V N G L F V V Q K V T E K K K N

ScaI (1437)

1401 TATTATTTGACCTAAGTGACAACACTGGGAAAATGGAAGTACTGGGGTTAGAAAACGAGGACACAATGAAATGTAAGGAAGGAGATAAGGTTGCACTTAC
 280▶ I L F D L S D N T G K M E V L G V R N E D T M K C K E G D K V R L T

PvuII (1534)

1501 ATTCTTCACTGTCAAAAAATGGAGAAAACTACAGCTGACATCTGGAGTTCATAGCACCATAAAGGTTATTAAGGCCAAAAAACAATAGAGAAGT
 313▶ F F T L S K N G E K L Q L T S G V H S T I K V I K A K K K T •

MscI (1626)
NheI (1620)

1601 AAAAAAGACCAATTCAAGCCGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTAT

HpaI (1758)

1701 TTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAAGTTAAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAG

EcoRI (1854)

1801 GGGGAGGTGTGGGAGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCAAATCAAGC
 1901 CTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTTCATGGAG

SspI (2093)

2001 TTTAAGATATAGTGATTTTTCCCAAGGTTTGAAGTACTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAATATTC

Swal (2107)
EcoO109I (2168)

2101 AGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGT
 2201 TGGACTTAGGGAACAAGGAACCTTAAATAGAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCA
 141▶ • N R T Y K L P I L E E

SacI (2368)
BstXI (2397)

2301 ATGGTGGTTTTGACCAGCTTCCATTCTCAATGAGCACAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCA
 128▶ 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 S V V
 2401 CCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAAT
 95▶ 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 I A I

2501 GGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGCTCTGATGGCCGCCCGACATGGTGC
 62 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 H H
 BspHI (2682)

2601 TTGTTGCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTAT
 28 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

VspI (2740)
 AseI (2740)

2701 AGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAACGA
 SacI (2797)

2800 GCTCTGCTTATATAGACCTCCACCCTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACT
 SpeI (2895)

2899 AGTCAAAAACAACTCCCATGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGC

SnaBI (3023)
 Eco105I (3023)

2998 ATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTCCCAAGTAGGAAAGTCCATAAGGTCATGTAAGTGGGCATAATGCCAGGCGGGCCATTTAC

NdeI (3128)

3098 CGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATG
 3198 GAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGGGGGTCGTTGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGT

SdaI (3306) PacI (3314) PciI (3324) BspLU11I (3324)

3298 TATGTAACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGG
 3396 CTCCGCCCCCTGACGAGCATCAGAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCT
 3496 CCCTCGTGCCTCTCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAG

ApaLI (3638)

3596 GTATCTCAGTTCGGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTCCAGCCGACCGCTGCGCTTATCCGGTAACTATCGTCTT
 3696 GAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGA
 3796 AGTGGTGGCCTAACTACGGCTACACTAGAAGAAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATC
 3896 CGGCAAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCT

EagI (4074)
 PacI (4054) SwaI (4063) NotI (4073)

3996 ACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTT
 4095 TATTTTCATTACATCTGTGTGTTGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGC
 4195 TGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA