



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

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
Bsu36I (291)

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCAGAGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NaeI (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560)
BstEII (555)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACCGGTACCATGGCGGAGGCTGCCATCGATCCCAGATGCGAGGAACA
 601 GGAAGAGCTCCATGCAGAAGACAGCGAAGGGCTCACAACCTCAGTGGAGAGAAGAAGACGAGGAAGAGGCTGCCGTGAGCAGCGTCAACGGGAGCGAGAG
 13▶ E E L H A E D S E G L T T Q W R E E D E E E A A R E Q R Q R E R E
 701 AGGCAGCTACAGGACAGGACAAAGATAAAGAAGATGATGGTGGCCATTCCTGGAACAGCCAGGACAGCAGACTCATCAGCCTGAAGTCTCTGAAC
 47▶ R Q L Q D Q D K D K E D D G G H S L E Q P G Q Q T L I S L K S S E
 801 TGGATGAAGATGAGGGTTTTGGTACTGGTCCCAAAGCCGAGCCAGCAATTCTGGGGGAATGAGGGGACTGCAGAAGGGGACTGAACCCTCTCA
 80▶ L D E D E G F G D W S Q K P E P R Q Q F W G N E G T A E G T E P S Q

XcmI (947)

901 AAGCGAGAGACCAGAGGAGAAACAAACAGAGGAGATTTCTACCAAGCCAAAGTCCACTTGGAGGAGTCAAACCTGAGCTACAGGGAGCCCGATCCAGAG
 113▶ S E R P E E K Q T E E S S H Q A K V H L E E S N L S Y R E P D P E

EcoO109I (1054)

1001 GATGCTGTTGGGGTTCTGGGGAGGCGGAAGAGCATCTGATACGTCATCAGGTGAGGACCCCGCCCTTTGGCCTTAGAAGACACCGTTGAGCTGAGTT
 147▶ D A V G G S G E A E E H L I R H Q V R T P S P L A L E D T V E L S

Tth111I (1137)
BsrBI (1152)

1101 CACCTCCCCTGAGCCCTACCACAAACTGGCTGATAGGACCGAGTCCCTGAACCGCTCCATTAAGAGCAACAGTGTGAAGAAGTCTCAACCAACCTT
 180▶ S P P L S P T T K L A D R T E S L N R S I K K S N S V K K S Q P T L

Bst1107I (1233)

1201 GCCCATTTCACAATTGATGAACGCTGCAGCAGTATACCCAGGCCACTGAGTCTTCTGGCCGAACCTCTAAGCTGTCCCGCCAGCCCTCCATAGAGCTG
 213▶ P I S T I D E R L Q Q Y T Q A T E S S G R T P K L S R Q P S I E L
 1301 CCCAGCATGGCCGTAGCCAGTACCAAGACTCTTTGGGAAACAGGAGAAGTGCAGAGTCACTGCTTCTAAGACACCCTCCTGCCAGGATATAGTAGCTG
 247▶ P S M A V A S T K T L W E T G E V Q S Q S A S K T P S C Q D I V A

BglII (1445)

1401 GAGACATGAGCAAGAAAAGTCTGTGGGAGCAGAAAGGAGGCTCCAAGATCTCATCCACCATCAAGAGCACCCCATCTGGAAAGCGGTACAAGTTCGTGGC
 280▶ G D M S K K S L W E Q K G G S K I S S T I K S T P S G K R Y K F V A

ScaI (1524)
NheI (1567)

1501 CACTGGACATGGGAAGTACGAGAAAGTACTTGTGGATGAGGGCTCAGCACCATAGACCATGTTTGCAGCTAGCTGGCCAGACATGATAAGATACATTGAT
 313▶ T G H G K Y E K V L V D E G S A P •

1601 GAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGTGAATA

HpaI (1705)

1701 AACAAAGTTAAACAACAATTGCATTCAATTTATGTTTCAGGTTCAAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAATGTGGTAT

EcoRI (1801)

1801 GGAATCTAAAAATACAGCATAGCAAACCTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTG
 1901 TTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTCTTTCATTTCTTTAT

SspI (2040)
SwaI (2054)

2001 GTTTTAAATGCAGTACCTCCACATTCCTTTTGTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTATTAGGCA

EcoO109I (2115)

2101 GAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGA

2201 GCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGG
 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 F C D P

2301 AGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATG
 111▶ 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 V A V I

StuI (2479)

2401 GTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTTCAGCACAGACAGTGCACCTGCCAATGTAGGCCTCAATGTGGACAGCAG
 77▶ 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 I H V A S

2501 AGATGATCTCCAGTCTTGGTCTGATGGCCGCCGACATGGTCTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTC
 44▶ 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 E V L E

BspHI (2629)

2601 CAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAA
 11 L D Q Q S I N F T K M

AseI (2687)

2701 ACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAAT

SpeI (2842)

2801 GGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGTGGAGACTTGAAATCCCCGT

SnaBI (2970)

2900 GAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGT

NdeI (3075)

3000 CCCATAAGGTCATGTACTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGCGTACTTGGCATATGATACACTTGATGTACTGC

3100 CAAGTGGGCGTTCACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGG

SdaI (3253) **PacI (3261)** **BspLU11I (3271)**

3200 CGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTG C A G G T T A A T T A A G A A C A T G T G A G C A A A A G G C C A G A A A A G

3298 GCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAATAATCGACGCTCAAGTCAGAGGTGGCGAA

3398 ACCCGACAGGACTATAAAGATACAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCCTT

ApaLI (3585)

3498 TCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCC

3598 CCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACA

3698 GGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCT

3798 GCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATT

3898 ACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGG

EagI (4021)

PacI (4001) **Swal (4010)** **NotI (4020)**

3998 CTAGTTAATTAACATTTAAATCAGCGGCCCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCT

4098 CTCATCAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA