



100

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

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTTCGCAACGGGTTTCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441)
NaeI (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560)
BstEII (555)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTCCTGAGATCACCGGTCACCATGGTGAATGAATACAAGAGAATTGTTCTTCTGACAGG
 601 ATTAATGGGTATTAATGACCATGATTTTAGAATGGTTAAGTCCTTGTGAGCAAAGAAGTAAACTAAATAGAATGCAAGATCAGTACGACAGAGTTAAG
 701 ATTGCTGACTTATGGAAGACAAGTCCCAAAAGATGCTGGAGTGGACCAACTGATAAACTATATAAGCAGATTCCAGGACTTGGAGACATTGTAATA
 47▶ I A D L M E D K F P K D A G V D Q L I K L Y K Q I P G L G D I A N

ScaI (886)

801 AACTCAAAAATGAGATGGCAAAAGCTAAAAGGACACGGACAGGAAACGGAAAACCGCAGCAAAAAGACAAAAGCAAGAAGAACCCAGTACTTCCCAACC
 80▶ K L K N E M A K A K R T R T G K R K T A A K R Q R Q E E P S T S Q P
 901 TATGTCCACCACAATGAAGATGCAGAACCAGAATCAGGGAGGAGTACACCTGACACACAGGTGGCTCAGTTATCTTTACCAACTGCTTCCCGAAGGAAC
 113▶ M S T T N E D A E P E S G R S T P D T Q V A Q L S L P T A S R R N

BglII (1054)

1001 CAAGCCATTCAAATTTCTCCAACAATAGCATCCAGCAGTGGTCAGACCAGCAGCAGATCTTCAGAAAACATTACAAAGCATCATTAGTCCCCCAAACTC
 147▶ Q A I Q I S P T I A S S S G Q T S S R S S E T L Q S I I Q S P K T

XcmI (1112)

1101 CAAAAAGACCGTCCAGCAGTATTCTGGACCCTCAGTGTCTTCAGGAACAGCATCCAGCAGTCCCAGGCACTAGGAGTTCCTTAGCAACAATAGCCAA
 180▶ P K R P S S S I L D P P V S S G T A S S S A Q A L G V P L A T I A K

BstEII (1246) **XcmI (1262)**

1201 GAGACAGAGACTGAAAAATGTACCCAAAGAACCTTCTGAGGTAAATGGTCACCAGCAAGGTTCCAAAAAGTGATGGTGTAAAAGTAAACAGAACCATTT
 213▶ R Q R L K N V P K E P S E V N G H Q Q G S K K V M V L K V T E P F

XmnI (1320) **EcoRI (1354)** **Tth111I (1378)**

1301 TCATATGACGTGACAGAAGAGAAGATGTTCCATGCCACCGTGGCTACGGAAACAGAATCTTTAGAGTAAAGGTTTTGACATTGTCTGAAGGAGAAGT
 247▶ S Y D V T E E K M F H A T V A T E T E F F R V K V F D I V L K E K

EcoO109I (1412)
BsiBI (1492)

1401 TCATACCAATAAGGTCCCTTACCATCTCAAACATGTTGGCTGCAATGGGTTTCATAAATATATACAGTGCATCTAGTGTGTCAGAGGTAATGATGGCGA
 280▶ F I P N K V L T I S N Y V G C N G F I N I Y S A S S V S E V N D G D
 1501 TCCAATGAATATCCCACTTTCACTGAGGAAAAGTGCCAATCGAACACCTAAAATCAACTATCTTTGCTCAAGAGAAAGGAATATTTGTGAATGGAGTG
 313▶ P M N I P L S L R K S A N R T P K I N Y L C S K R R G I F V N G V
 1601 TTTACTGTATGTAAGAAAAGAAAAGTGAACACATTTGCTATGAGATAGGAGATGATACAGGGATGATGGAAGTGGAGGTCTACGGACGACTTACCA
 347▶ F T V C K K E E K W N Y I C Y E I G D D T G M M E V E V Y G R L T

BglII (1777)
PvuII (1771)

1701 ATATTGCTTGAATCCTGGAGATAAACTTAGACTCATATGCTTTAAACTGATCCAGATGAAGAAAAAGCACAGCTGAGATCTACAACACACAGTAACAT
 380▶ N I A C N P G D K L R L I C F K L I P D E E K A Q L R S T T H S N M

MscI (1866)
NheI (1860)

1801 GCAGGTTATCAAAAATAAGAATTGAGAAACAACCACTCAGTCCTGCTTCTTTATGAAACCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTG
 413▶ Q V I K T K N •

HpaI (1998)

1901 GACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAACAAGT

MfeI (2009)
EcoRI (2094)

2001 TAACAACAACAATTGCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAACCTCTACAAATGGGTATGGAATTC
 2101 TAAAAACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTGAAATCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAA
 2201 TGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTTCCCAAGGTTTGAAGTCTCTTCACTTTCTTTATGTTTTAA

SwaI (2347)

2301 ATGCACTGACCTCCACATTCCTTTTTAGTAAAAATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAAATCCA

EcoO109I (2408)

2401 GATGCTCAAGGCCCTTCAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTA

2501 GCTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCTCAATGAGCACAAGCAGTCAGGAGCATAG
 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 A Y

SacI (2608) BstXI (2637)
 2601 TCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCAACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAA
 108 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 T D F

StuI (2772)
 Eco147I (2772)

2701 AGTCCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGAT
 75 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 I I
 2801 CTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTCTTGTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGTCCAGATCC
 42 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 L D

BspHI (2922)

XmnI (2914)
 2901 TGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGT
 8 Q Q S I N F T K M

SacI (3037)

3001 GGATGGCGTCTCCAGCTATCTGACGGTCTACTAAACGAGCTCTGCTTATATAGACCTCCCACCCTACACGCCTACCGCCATTGCGTCAATGGGGCGG

SpeI (3135)

3101 AGTTGTTACGACATTTTGGAAAGTCCCCTGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCTGAGTCAA

SnaBI (3263)
 Eco105I (3263)

3200 ACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAA
 3300 GGTCATGTACTGGCATAATGCCAGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGTACTGCAAGTGG
 3400 GCAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGCGGGGGT

PstI (3547) SdaI (3546) PacI (3554) BspLU11I (3564)

3500 CGTTGGGCGGTCAGCCAGGCGGGCATTACCCTAAGTTATGTAACGCC T G 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 G A
 3598 ACCGTA AAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGAC
 3698 AGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCGCTCTCTGTTCCGACCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCT

ApaLI (3878)

3798 TCGGGAAGCGTGGCGTTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTT
 3898 AGCCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAG
 3998 CAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAG
 4098 CCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCA

PacI (4294)

4198 GAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACACGTTAAGGGATTTTGGTCATGGCTAGTTA

EagI (4314)

SwaI (4303) NotI (4313)
 4298 ATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGGTTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATC
 4398 AAAACAAAACGAAACAAAACAAACTAGCAAAATAGGCTGTCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA