



PvuI (7)
SgfI (6)
MfeI (82)

1 GGATCTGCGATCGCTCCGGTGCCCGTCACTGGGCGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGGGGTAACGGGAAAGTATGCTGTACTGGCTCCGCCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTTCGAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCCGCCGCCCTACCTGAGGCC
 301 GCCATCCACGCCGGTTGAGTCGCGTCTGCGCCCTCCCGCTGTGGTGCTCCTGAAGTCCGCTCCGCCCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441)
NaeI (441)

401 GGGCCTTTGTCGGCGCTCCCTTGAGGCTACCTAGACTCAGCCGGCTCTCCAGCTTTGCTGACCTGCTTACTCAACTCTACGCTCTTTGTTTCGTTT

SphI (566)
BspEI (558)

501 TCTGTTCTGGCGGTTACAGATCCAAGCTGTGACCGCCGCTACCTGAGATCACCGCTCCGACAGCATGCCCACTCCAGCCTGCATCCATCCATCCC
1► M P H S S L H P S I P

Bsp120I (617)
BstEII (657)

601 GTGTCCAGGGTACGCGGCCAGAGGCGAGCTTGGTCTGCTGAGTGCCTGCCTGGTACCCTTTGGGGGCTAGGAGACCACAGACACACTCTC
 11► C P R G H G A Q K A A L V L L S A C L V T L W G L G E P P E H T L

SexAI (704)
Asp718 (794)
Asp718 (701)
Acc65I (794)
Acc65I (701)

701 CGGTACCTGGTCTCCACCTAGCTCCCTGCAGTGGGACTGCTGTTAAACGGGTCTGCAGCCTGGCTGAGGAGCTGCCACATCCACTCCAGGTACC
 45► R Y L V L H L A S L Q L G L L L N G V C S L A E E L R H I H S R Y

Bsp120I (854)

801 GGGCAGCTACTGGAGGACTGTGCGGGCTGCCTGGGCTGCCCTCCCGCTGGGCTGTTGCTGCTCCATCTATTCTACTACTCCCTCCCAAA
 78► R G S Y W R T V R A C L G C P L R R G A L L L L S I Y F Y Y S L P N

SfiI (970)
BglII (995)

901 TCGGTCGGCCCGCCTTCACTTGGATGCTTCCCTCCTGGGCTCTCGCAGGCACTGAACATCCTCCTGGGCTCAAGGGCTGGCCCCAGCTGAGATC
 111► A V G P P F T W M L A L L G L S Q A L N I L L G L K G L A P A E I

NcoI (1035)
EcoRV (1064)

1001 TCTGCACTGTGAAAAAGGAATTTCAACGTGCCCATGGGCTGGCATGGTCAATTACATCGGATATCTGCGGCTGATCTGCCAGAGCTCCAGGCC
 145► S A V C E K G N F N V A H G L A W S Y Y I G Y L R L I L P E L Q A

BstBI (1103)

1101 GGATTCGAACCTACAATCAGCATTACAACAACCTGTACTCGGGTGCAGTGAGCCAGCGGCTGTATATTCTCCTCCATTTGACTGTGGGGTGCCTGATAA
 178► R I R T Y N Q H Y N N L L R G A V S Q R L Y I L L P L D C G V P D N

BstEII (1255)
AgeI (1252)

1201 CCTGAGTATGGTACCCCAACATTCGCTTCTGGATAAAGTCCCGCAGCAGCCGGTGACCTGTGGCATCAAGGATCGGGTTTACAGCAACAGCATC
 211► L S M A D P N I R F L D K L P Q Q T G D R A G I K D R V Y S N S I

1301 TATGAGCTTCTGGAGAACGGGCGAGCGGGCCACCTGTGCTGGAGTACGCCACCCCTTGCAGACTTTGTTGCCATGTCACAATACAGTCAAGCTG
 245► Y E L L E N G Q R A G T C V L E Y A T P L Q T L F A M S Q Y S Q A

1401 GCTTTAGCGGGGAGGATAGGCTTGGAGCAGCAAACTTCTTGCAGGACACTTGGAGACATCCTGGCAGATGCCCTGAGTCTCAGAACAACTGCCGCT
 278► G F S R E D R L E Q A K L F C R T L E D I L A D A P E S Q N N C R L

1501 CATTGCCTACCAGAACCTGCAGATGACAGCAGCTTCTCGCTGTCCAGGAGGTTCTCCGGCACCTGCGGAGGAGAAAGGAAGGTTACTGTGGGC
 311► I A Y Q E P A D D S S F S L S Q E V L R H L R Q E E K E E V T V G

BpuAI (1605)
BbsI (1605)

1601 AGCTTGAAGACCTCAGCGGTGCCAGTACCTCCACGATGCCAAGAGCCTGAGCTCCTCATAGTGAATGAAAAGCCCTCCCTCTCCGACCGATT
 345► S L K T S A V P S T S T M S Q E P E L L I S G M E K P L P L R T D

BamHI (1705)
NdeI (1745)

1701 TCTCTGGATCCATCCCTATGATGTGCCAGACTATGCTGGCTATCCATATGATGTTCTGATTATGCTGGATACCCCTTATGATGTGCCAGACTATGCCTA
 378► F S G S Y P Y D V P D Y A G Y P Y D V P D Y A G Y P Y D V P D Y A •

MscI (1808)
NheI (1802)

1801 AAGTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCAACTAGAATGCAGTAAAAAATGCTTTATTTGTGAAATTTGTGATGC
 411►

HpaI (1940)
MfeI (1951)

1901 TATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAATTGCATTCTTTATGTTTCAGGTTTCAGGGGAGGTGGGAGGTT

EcoRI (2036)

2001 TTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAAATACAGCATAGCAAAACTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTT
141► • N R T Y K L P I L E E I T T K V L

SspI (2275)
SwaI (2289)

2201 TTCCAAGGTTTGAAGTACTCTTCTTCTTATGTTTAAATGCACTGACCTCCACATCCCTTTTATGAAAAATTCAGAAAAATTTAAATACAA
 2301 TCATTGCAATGAAAAAATGTTTTTTATTAGGCAGAAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAG
 2401 GAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTCTCGGTGACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGC
141► • N R T Y K L P I L E E I T T K V L

BstXI (2579)

2501 TTGCCATTCATCTCAATGAGCACAAGCAGTCAAGGACATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCA
 122► 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 R I S R D V
 2601 CCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAAATGGCAATGGCTTCAGCACAGACAGT
 89► 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 A E A C V T

StuI (2714)
 2701 GACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCGACATGGTGCTTGTCTCATAGAGC
 56 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 K N D E Y L

BspHI (2864)
 BpuAI (2860)
 BbsI (2860)

XmnI (2856)
 2801 ATGGTGATCTTCTCAGTGGCGACCTCCACCAGTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCCTATAGTGAGTCGTATTATACT
 22 M T I K E T A V E V L E L D Q Q S I N F T K M

AseI (2922)
 2901 ATGCCGATATACTATGCCGATGATTAATTGTCAAACACGCGTGGATGGCTCTCCAGCTTATCTGACGGTTCCTAAACGAGCTCTGCTTATATAGACCT

SpeI (3077)
 3001 CCCACCGTACACGCCTACCGCCATTTCGCTCAATGGGCGGAGTTGTACGACATTTTGGAAAGTCCCGTTGATTACTAGTCAAAACAACTCCCATT
 3101 GACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATG

SnaBI (3205)
 3201 ACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCATAAGGTCACTGACTGGCATAATGCCAGCGGGCCATTTACCGTCATTGACGTCAATAGGGG

NdeI (3310)
 3301 GCGTACTGGCATATGATACACTTGATGACTGCCAAGTGGGAGTTACCCTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTAC

PacI (3496)
SdaI (3488)
SbfI (3488)
 3401 TATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAA

PciI (3506)
BspLU11I (3506)
 3501 TTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAGGCCGCTGTGCGTTTTTCCATAGGCTCCGCCCTGACGAGCATCA
 3601 CAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCG
 3701 ACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTCGGGAAGCGTGGCGTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGGTGAGGTCG

ApaLI (3820)
 3801 TTCGCTCAAGCTGGGCTGTGTGCACGAACCCCGTTGAGCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGAGTCAACCCGGTAAGACACGA
 3901 CTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTAC
 4001 ACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTA
 4101 GCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAA

EagI (4256)
PacI (4236) **SwaI (4245)** **NotI (4255)**
 4201 CGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAATCAGCGGCCCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTG
 4301 GTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCAGTGAAGTGCAGGTGC
 4401 CAGAACATTTCTCTATCGAA