



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

1 GGATCTGGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
Bsu36I (291)

201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCCTGTTGCGCCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

KasI (535)
BspHI (560)

501 TCTGTTCTGGCGGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTCATCATGAATAATGCTGGGCACGGCCACCCGGAGGCTGCG
 1 M N N A G H G P T R R L R

Acc65I (676)
BsaBI

601 AGGCTTGGGGTCTGGCCGGGTGGCTCTGCTCGCTGCCTCTGGCTCTGTGGTGTGGGTCAGCCCTCGGGGTACCCGGCACCCAGCCACG
 13 G L G V L A G V A L L A A L W L L W L L G S A P R G T P A P Q P T
 701 ATCACCATCTTGTCTGGCACTGGCCCTTCACTGACCAGCCCCAGAGCTGCCAGCGACACCTGCACCCGCTACGGCATCGCCCGTGCACCTGAGTG
 47 I T I L V W H W P F T D Q P P E L P S D T C T R Y G I A R C H L S

MscI (815)
BbsI (835)
PstI (853)
EagI (889)
NotI (888)

801 CCAACCGAAGCCTGCTGGCCAGCGCCGACGCCGTGGTCTTCCACCACCGGAGCTGCAGACCCGGCGGTCCCACCTGCCCTGGCCAGCGCCGCGAGG
 80 A N R S L L A S A D A V V F H H R E L Q T R R S H L P L A Q R P R G

NcoI (920)

901 GCAGCCCTGGGTGTGGCCCTCCATGGAGTCTCCTAGCCACACCACGGCTCAGCCACCTCCGAGGCATTTCAACTGGGTGCTGAGCTACCGCGCGAC
 113 Q P W V W A S M E S P S H T H G L S H L R G I F N W V L S Y R R D

Bsp120I (1042)
XcmI (1064)

1001 TCGGACATCTTTGTGCCCTATGGCCGCTGGAGCCCACTGGGGGCCCTGCCACCGCTGCCAGCCAAGAGCAGGGTGGCCGCTGGGTGGTCACT
 147 S D I F V P Y G R L E P H W G P S P L P A K S R V A A W V V S N

BsrBI (1105)
KasI (1140)
BstXI (1196)

1101 TCCAGGAGCGCAGCTGCGTGCCAGGCTGTACCGGCGCTGCGCCCTCATCTGCGGGTGGATGTCTTTGGCCGTGCCAATGGACGGCCACTGTGCGCCAG
 180 F Q E R Q L R A R L Y R Q L A P H L R V D V F G R A N G R P L C A S
 1201 CTGCTGTGGCCACCGTGGCCAGTACCGCTTCTACCTGTCTTTGAGAAGTCTCAGCACCGGACTACATTACGGAGAAATTTGGCGCAACGCACTG
 213 C L V P T V A Q Y R F Y L S F E N S Q H R D Y I T E K F W R N A L

Bsp120I (1327)
NgoMIV (1359)

1301 GTGGTGGCACTGTGCCAGTGGTGTGGGGCCCCACGGGCCACCTATGAGGCCTTCGTGCGGCTGACGCCTTCGTGCATGTGGATGACTTTGGCTCAG
 247 V A G T V P V V L G P P R A T Y E A F V P A D A F V H V D D F G S
 1401 CCCGAGAGCTGGCGGCTTCTCCTACTGGCATGAATGAGAGCCGATACCAACGCTTCTTTGCTGGCGTACAGGCTCCGCGTGGCACTGTTACCGCACTG
 280 A R E L A A F L T G M N E S R Y Q R F F A W R D R L R V R L F T D W

Psp1406I (1505)

1501 GCGGGAACGTTTTGTGCCATCTGTGACCGCTACCCACACCTACCCCGACGCAAGTCTATGAGGACCTTGGGGTGGTTTCAGGCCTGAGATCCGCTG
 313 R E R F C A I C D R Y P H L P R S Q V Y E D L E G W F Q A •

MscI (1632)

1601 GCCGGGGAGGTGGGTGTGGGTGAAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAACCACAAGTGAATGCAGTGAATAAATG

HpaI (1764)
MfeI (1775)

1701 CTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCTTTATGTTTCAG

EcoRI (1860)

1801 GTTCAGGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTAAAATACAGCATAGCAAACTTTAACCTCCTCAA
 1901 TCAAGCCTCTACTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTC

SspI (2099)

2001 ATGGAGTTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTCTTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTGTAGTAA

Swal (2113)

2101 ATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTT
 2201 AGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGGTACTTGGGGGATGAGT
 141 • N R T Y K L P I L

SacI (2374)

2301 TCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGC
 130 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 S
 2401 TGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAAT
 97 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 I
 2501 GGCAATGGCTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCCCGACA
 64 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 (2688)
BbsI (2684)
XmnI (2680)

2601 TGGTGCTTGTGCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGATGGCCC
30 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 ←

2701 TCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTATCTGACGGTTCACTA
AseI (2746) ←

2801 AACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATT
SacI (2803)

2901 TACTAGTCAAAAACAACTCCATTGACGTCAATGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCCTATCCACGCCATTGATGTACTGCCAAAA
SpeI (2901) ←

3000 CCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCAT
SnaBI (3029)

3100 TTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGAGTTTACCGTAAATACTCCACCCATTGACGTC
NdeI (3134)

3200 AATGAAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGT

3300 AAGTTATGTAACGCCCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCA
PstI (3313) SdaI (3312) PacI (3320) BspLU11I (3330) ←

3398 TAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCTTTCCCCCTGGA

3498 AGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCT

3598 GTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTGCGCCTTATCCGGTAACTATCG
ApaLI (3644)

3698 TCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTC

3798 TTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGA AAAAGAGTTGGTAGCTCTT

3898 GATCCGGCAAACAACACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTT

3998 TTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATAT
PacI (4060) SwaI (4069) NotI (4079) EagI (4080)

4098 CTTTATTTTACATCTGTGTGTTGGTTTTTTGTTGTAATCGTAACATAACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATA
4198 GGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTATCGAA