



PvuI (7) SgfI (6) MfeI (82) EcoNI (96)
1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) HindIII (245) Bsu36I (291) EcoNI (287)
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

KasI (535) AgeI (552) BspHI (560) Acc65I (575)
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCATCATGAATTGTATTGGGTACCACCCACCAGGAGGCTGCG
601 GGCCTGGGCGGCCTAGCTGGAGGAGCAACATTCATGTAATTTGGTTTTCTGGCTGTGGGATCAGCTCCTGGAAGTGCCCTGTGCCTCAGTCCACA
13▶ A W G G L A G G A T F M V I W F F W L W G S A P G S A P V P Q S T
1▶ M N C I G Y H P T R R L R

EagI (736) MscI (779)
701 CTCACCATCCTTATCTGGCACTGGCCTTTCACCAACCGCCGCGCAGAGCTACCTGGTGACACCTGCACCTCGTATGGCATGGCAGCTGCCGTCTGAGTG
47▶ L T I L I W H W P F T N R P P E L P G D T C T R Y G M A S C R L S

NheI (813)
801 CTAACCGAGCCTGCTAGCCAGTGTGATGCTGTGGTCTTCCACCACCGTGGAGCTGCAAAACCGCAATCTCTCTACCCTGGACCAGAGGCCACACGG
80▶ A N R S L L A S A D A V V F H H R E L Q T R Q S L L P L D Q R P H G

NcoI (920) NcoI (942)
901 ACAGCCTTGGGTCTGGGCTCCATGGAATCGCCAGTAATACCCATGGTCTCCATCGCTTCCGGGGCATCTTCAACTGGGTGCTGAGCTATCGCGTGAT
113▶ Q P W V W A S M E S P S N T H G L H R F R G I F N W V L S Y R R D

EcoRV (1003) Bsp120I (1042) XcmI (1064)
1001 TCAGATATCTTTGTACCCTACGGTGCCTTGGAGCCTCTCTCTGGCCACATCCCACTACCGCCAAAAGCAGGATGGCTGCCTGGGTGATCAGCAATT
147▶ S D I F V P Y G R L E P L S G P T S P L P A K S R M A A W V I S N

BsrBI (1105) PstI (1150)
1101 TCCAGGAGCGGCAGCGTGAAGAGTGTACCGCAGCTGGCCCTCATCTGCAGTGGATGTGTTCCGTCGCGCCAGCGGACGCCCTATGCGCTAA
180▶ F Q E R Q Q R A K L Y R Q L A P H L Q V D V F G R A S G R P L C A N

Acc65I (1223)
1201 TTGTCTGCTGCCACTTTGGCCCGTACCGCTTCTACCTGGCCTTTGAGAAGTACAGCATCGGGACTACATCACTGAGAAGTCTGGCGCAATGCCCTG
213▶ C L L P T L A R Y R F Y L A F E N S Q H R D Y I T E K F W R N A L

EcoO109I (1326) BbrPI (1378) BsrGI (1374)
1301 GCGGCTGGTGTGTACCCGTGGGACCTCCTCGGGCCACCTACGAGGCTTTTGTGCCACCAGATGCCTTTGTACACGTGGACGACTTCAGCTCTG
247▶ A A G A V P V A L G P P R A T Y E A F V P P D A F V H V D D F S S
1401 CCCGTGAAGTGGTGTCTTCTCGTACAGCATGAATGAGAGTCGTTATCGTGGCTTCTTTGCTTGGCGAGACCGGCTCCGTGTGCGGCTCCTGGGTGACTG
280▶ A R E L A V F L V S M N E S R Y R G F F A W R D R L R V R L L G D W

Eco47III (1505)
1501 GAGGGAGCGCTTGCACCATCTGTGCCGCTACCCCTTACTTGCCCCGAGCCAGGCTATGAAGACCTTGAAGCTGGTCCAGGCTTGAAGTCCCGCT
313▶ R E R C T I C A R Y P Y L P R S Q V Y E D L E S W F Q A •

AvrII (1610) MscI (1622)
1601 GCTGGGAGAGCCTAGGACTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAACCACAAGTGAATGCAGTGAAAAAATGCTTTATTTGT

HpaI (1754) MfeI (1765)
1701 GAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAATTGCATTCATTTATGTTTCAGGTTACAGGGG

EcoRI (1850)
1801 AGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCT
1901 ACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTA

SpI (2089)
2001 AGATATAGTGTATTTTCCAAGTTTGAAGTACTCTTCAATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTAGTAAATATTAGAA

Swal (2103) EcoO109I (2164)
2101 ATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGA
2201 CTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGGGGGATGAGTTCCTCAATGG
141▶ • N R T Y K L P I L E E I T

SacI (2364) BstXI (2393)
2301 TGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCT
127▶ 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 R
2401 GATGGATCTGCCACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCT
94▶ 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 A

StuI (2528)
2501 TCAGCACAGACAGTGACCCTGCCAATGTAGGCCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTGT
60▶ 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 K N

BspHI (2678)

XmnI (2670)

2601 TGCCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCCTATAGT
 27 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

AseI (2736) SacI (2793)

2701 AGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCT

SpeI (2891)

2801 GCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCA
 2900 AAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATC

SnaBI (3019)

3000 ATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCAT

NdeI (3124)

3100 TGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGT
 3200 CCCTATTGGCGTTACTATGGGAACATACGTATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTA

PstI (3303)
SdaI (3302) PacI (3310) **BspLU11I (3320)**

3300 ACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTCCATAGGCTCCG
 3398 CCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTTCCCCTGGAAAGCTCCCTCG
 3498 TGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTACGCTGTAGGTATCT

ApaLI (3634)

3598 CAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCC
 3698 AACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTCTTGAAGTGGT
 3798 GGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAA
 3898 ACAAAACCACCGCTGGTAGCGGTGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGG

EagI (4070)

PacI (4050) SmaI (4059) **NotI (4069)**

3998 TCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTC
 4098 ATTACATCTGTGTGTTGTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCC
 4198 AGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA