



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

1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGGGGTAACGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCAGAGGGCTCGCATCTCTCTTACAGCGCCCGCCCTACCTGAGGCC

301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441) **NaeI (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

KasI (535) **AgeI (552)** *BspHI (560)*
XcmI (596)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCATCATGAGTGCACCATCGAGAAGATCCTGACAGACGCCAA

1MetSerCysThrIleGluLysIleLeuThrAspAlaLy

EagI (632) **NotI (631)**
SgrAI (670)

601 GACGCTGCTGGAGAGGCTACGGGAGCACGATGCGGCGCCGAGTGCCTGGTGGATCAGTCGGCGGCGTGCACCGCGGGTAGCAGCTATGCGGGAGGCG

13sThrLeuLeuGluArgLeuArgGluHisAspAlaAlaAlaGluSerLeuValAspGluSerAlaAlaLeuHisArgArgValAlaAlaMetArgGluAla

Eco47III (705) **BspEI (711)** **Ppu10I (731)** **NsiI (731)** **BspLU11I (749)**

701 GGGACAGCGCTTCCGGACAGTATCAAGAGGATGCATCCGATATGAAGACATGTCCAAATACAAACCTCACATTCTGCTGTCCCAAGAGAACACACAGA

47GlyThrAlaLeuProAspGluNtyrGluGluAspAlaSerAspMetLysAspMetSerLysTyrLysProHisIleLeuLeuSerGluGluAsnThrGluNle

BspHI (872)

801 TTAGAGACTTGAACAGGAAAACAGAGACTATGGATTCTTGGAGAACACCAGGATGCTTGGAACTTATCATGAGCAAATATCGGAAAACAGATGTT

80IleArgAspLeuGluGluGluAsnArgGluLeuTrpIleSerLeuGluGluHisGluAspAlaLeuGluLeuIleMetSerLysTyrArgLysGluNMetLe

PstI (965)

901 ACAGTTAATGGTTGCTAAAAAGCGGTGGATGCTGAACAGTCTGAAAGCTCACCAGTCTCAGTCTGCAGAAATTGAGAGTCAAGATTGACAGAATCTGT

113uGluNLeuMetValAlaLysLysAlaValAspAlaGluProValLeuLysAlaHisGluSerHisSerAlaGluIleGluSerGluNleAspArgIleCys

1001 GAAATGGGAGAAGTGATGAGGAAAAGCAGTTCAGGTGGATGATGACCAGTTTTGTAAGATTGAGGAAAATTAGCCCAATTAGAGCTTAAAAAAGGAAC

147GluMetGlyGluValMetArgLysAlaValGluNValAspAspAspGluNpheCysLysIleGluGluLysLeuAlaGluNLeuGluLeuGluAsnLysGluL

1101 TTCGAGAATTATTGTCATCAGCAGTGAAGTCTTCAAGCCAGAAAGGAAAATCAATGGACACTGCTTCCCAAGCCATCAAATAACTGAACTCTGAATG

180euArgGluLeuLeuSerIleSerSerGluSerLeuGluNAlaArgLysGluAsnSerMetAspThrAlaSerGluNAlaIleLys●●●

MscI (1219) **NheI (1213)**

1201 ATGGCTGGAGATTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAA

HpaI (1351) **MfeI (1362)**

1301 ATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAACAAACAACAAATTGCATTCTTTTATGTTTCAGGTTTCAGGGGAGG

EcoRI (1447)

1401 TGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAACTTAAAATACAGCATAGCAAACCTTAACTCCAAATCAAGCCTCTACT

1501 TGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTTCATGGAGTTAAGA

SspI (1686)

1601 TATAGTGTATTTCCCAAGGTTGAACTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTATAGTAAAATATTCAGAAATA

SwaI (1700)
EcoO109I (1761)

1701 ATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTT

1801 AGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGG

141AsnArgThrTyrLysLeuProIleLeuGluGluIleThrTh

SacI (1961) **BstXI (1990)**

1901 TTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGAT

126rLysValLeuLysGluAsnMetGluIleLeuValPheCysAspProAlaTyrAspSerIleLeuGluArgCysMetGlyCysProSerValValArgIle

2001 GGATCTGTCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCCTGCTCACAGCAGACCAATGGCAATGGCTTCA

93SerArgAspValGluAspSerTyrProHisArgValAlaValIleThrAspPheAspLysGluGluAsnSerValAlaSerGlyIleAlaIleAlaGluAla

StuI (2125)

2101 GCACAGACAGTGACCTGCCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCCGACATGGTGCTTGTGT

59IleCysValThrValArgGlyIleTyrAlaGluIleHisValAlaSerIleIleGluGlyThrLysThrArgIleAlaAlaGlyValHisHisLysAsnAs

BspHI (2275)

2201 CCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTCTATGATGGCCCTCCTATAGTGAGT

26pGluTyrLeuMetThrIleLysGluThrAlaValGluValLeuGluLeuAspGluNleNserIleAsnPheThrLysMet

AseI (2333)
SacI (2390)

2301 CGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTATCTGACGGTTCACTAAACGAGCTCTGCT

2401 TATATAGACCTCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTTATTACTAGTCAAAA **SpeI (2488)**
2500 CAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATG

SnaBI (2616)
2600 GTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGA

NdeI (2721)
2700 CGTCAATAGGGGGCTACTTGCCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCC
2800 TATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACG

PstI (2900)
SdaI (2899) **PacI (2907)** **BspLU11I (2917)**
2900 **CCTGCAGGTTAA** TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCC
2998 CCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGC
3098 GCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTTCCCTTCGGGAAGCGTGGCGCTTTTTCATAGCTCACGCTGTAGGTATCTCAG

ApaLI (3231)
3198 TTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCGCTGCGCTTATCCGTAACATATCGTCTTGAGTCCAAC
3298 CCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGC
3398 CTAACACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACA
3498 AACCAACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGCTCT

PacI (3647) **SwaI (3656)** **EagI (3667)** **NotI (3666)**
3598 GACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGAATAAAATATCTTTATTTTCATT
3698 ACATCTGTGTGTTGGTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGT
3798 GCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA