



PvuI (7)
SgfI (6) MfeI (82) EcoNI (96)
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAAGTGGCGGGGTAACCTGGAAAGTGATGTCGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245) **Bsu36I (291)**
Psp1406I (203) PvuII (239) EcoNI (287)
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCTTACCGCGCCCGCCGCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCCTGCTGCCGCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441) **NaeI (441)**
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTACGCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGCTTTGTTTCGTTT

KasI (535) **AgeI (552)** **BspHI (560)** **BglIII (581)** **XcmI (596)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCATCATGAGCTGCACCATCGAGAAGATCTTGACGGACGCCAA
1MetSerCysThrIleGluLysIleLeuThrAspAlaLys

BsrBI (610) **EagI (635)** **SgrAI (670)**
601 GACGCTGTGGAGCGGCTGCGCGAGCAGATGCGGCGGCGGAGTCGCTGGTGGACAGTCGGCTGCGCTGCACCGCGGGTGGCGGGATGCGGGAGGCC
13sThrLeuLeuGluArgLeuArgGluHisAspAlaAlaAlaGluSerLeuValAspGluSerAlaAlaLeuHisArgArgValAlaAlaMetArgGluAla

KasI (700) **NsiI (731)** **BspLU11I (749)**
701 GGC GCGTGTACCCGAGCAGTATCAAGAGGATGCATCCGACGTGAAGACATGTCTAAATATAAACCTCACATTCTGCTGTCTCAAGAGAATACCCAGA
47GluAlaValLeuProGluGluN-TyrGluGluAspAlaSerAspValLysAspMetSerLysTyrLysProHisIleLeuLeuSerGluGluAsnThrGluNl

BspHI (872)
801 TTAGAGACTTACAGCAGGAAAACAGAGAACTGTGGGTTTCTTGGAGGAGCACCAGGATGCGTTGAACTGATCATGAGCAAGTACCGGAAACAGATGTT
80IleArgAspLeuGluGluGluAsnArgGluLeuTrpValSerLeuGluGluHisGluAspAlaLeuGluLeuIleMetSerLysTyrArgLysGluNmetLe

XmnI (934) **ClaI (985)**
901 ACAGTTAATGGTCTAAGAAAGCCGTGGATGCCGAACAGTTCTGAAAGCTCACCAGTCTACTCTGCAGAGATTGAAAGTCAGATCGATAGAACTGT
113uGluNLeuMetValAlaLysLysAlaValAspAlaGluProValLeuLysAlaHisGluSerHisSerAlaGluIleGluSerGluNleAspArgIleCys

PvuII (1075)
1001 GAAATGGGAGCAGTGTGCGGAGAGCTGTTCCAGGTGGACGATAACCAATTCTGTAAGTTCCAGGAGAGACTAGCTCAGCTGGAGCTTAAAATAAGGAAC
147GluMetGluAlaValMetArgArgAlaValGluNValAspAspAsnGluNpheCysLysValGluGluArgLeuAlaGluNLeuGluLeuGluAsnLysGluL

XcmI (1175)
1101 TTCGAGAGTTACTGTCCATCAGCAGTGAATCTCTGCAGTTGGAAAAGAAAGCTCTGTGGCTCCTGCCTCTCAGACCATCAAGTAACTGGACTCCGAAG
180euArgGluLeuLeuSerIleSerSerGluSerLeuGluNValGluLysGluSerSerValAlaProAlaSerGluNThrIleLys•••

MscI (1209) **NheI (1203)**
1201 GCTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGCAAACCAACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATG

HpaI (1341) **MfeI (1352)**
1301 CTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCTTTATGTTTCAGGTTTCAGGGGAGGTGTGGAGGT

EcoRI (1437)
1401 TTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCTCCTCAATCAAGCCTCTACTTGAATCCTTT
1501 TCTGAGGGATGAATAAGGCATAGGCATCAGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTCATGGAGTTAAGATATAGTGTAT

SspI (1676) **SwaI (1690)**
1601 TTTCCAAGGTTTGAAGTACTCTTCAATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTATGAAAAATTCAGAAATAATTTAAATAC

EcoO109I (1751)
1701 ATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAA
1801 GGAACCTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAG
141AsnArgThrTyrLysLeuProIleLeuGluGluIleThrThrLysValLeu

SacI (1951) **BstXI (1980)**
1901 CTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCC
123LysGluAsnMetGluIleLeuValPheCysAspProAlaTyrAspSerIleLeuGluArgCysMetGluCysProSerValValArgIleSerArgAspV
2001 ACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCAGACAGAG
89AlGluAspSerTyrProHisArgValAlaValIleThrAspPheAspLysGluGluAsnSerValAlaSerGluIleAlaIleAlaGluAlaCysValTh

StuI (2115)
2101 TGACCCTGCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCAGTCTTGGTCTGATGGCCCGCCGACATGGTGCTTGTGTCTCATAGAG
56rValArgGlyIleTyrAlaGluIleHisValAlaSerIleIleGluGluYThrLysThrArgIleAlaAlaGluValHisHisLysAsnAspGluTyrLeu

XmnI (2257)
2201 CATGGTGATCTTCTCAGTGGCGACTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATAC
23MetThrIleLysGluThrAlaValGluValLeuGluLeuAspGluNglNserIleAsnPheThrLysMet

AseI (2323) **SacI (2380)**
2301 TATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAACGAGCTGCTTATATAGACC

2401 TCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTTGATTTACTAGTCAAAAACAACTCCCA **SpeI (2478)**

2500 TTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGA

2600 **SnaBI (2606)**
TGAATAACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGG

2700 **NdeI (2711)**
GGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTT

2800 ACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGT **SdaI (2889)** **PacI (2897)**

2899 **BspLU11I (2907)**
TAA TTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCA

2999 TCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCCTGTT

3099 CCGACCTGCCGCTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGG

3199 **ApaLI (3221)**
TCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACA

3299 CGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGC

3399 TACTAGAGAACAAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTTTGATCCGGCAAAACAAACCACCGCTG

3499 GTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTG

3599 **PacI (3637)** **Swal (3646)** **EagI (3657)** **NotI (3656)**
GAACGAAAACACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCAATAAAATATCTTTATTTTATTACATCTGTGTG

3699 TTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGG

3799 TGCCAGAACATTTCTCTATCGAA