



PvuI (7)
SgfI (6) **MfeI (82)**
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAAGTGGCGGGGTAACGGAAAGTGATGTCGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)**
PvuII (239) **Bsu36I (291)**
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACAGCGCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCCTCCCGCCTGTGGTGCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441)
NaeI (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGTCTTTGTTTCGTTT

BspHI (560)
KasI (535) **AgeI (552)** **Bsp120I (582)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCCCTACCTGAGATCACCGGTCATCATGAGAGAGAACATGGCCAGGGGCCCTTGCAACGCGCC
601 GAGATGGGTGTCCCTGATGGTGCTCGTCCATAGGCACCGCGTGACAGCGCGCTCAACCTGGCGTGTGGTCAGGATCTCCAGAAGGGCCTGGAC
130▶oArgTrpVal SerLeuMetVal LeuValAlaIleGlyThrAlaVal ThrAlaAlaValAsnProGlyValValValArgIleSerGlnLysGlyLeuAsp

BsrBI (722)
701 TACGCCAGCCAGCAGGGGACGGCCGCTCTGAGAAGGAGCTGAAGAGGATCAAGATTCCTGACTACTCAGACAGCTTTAAGATCAAGCATCTTGGGAAGG
47▶TyrAlaSerGlnGlyThrAlaAlaLeuGlnLysGluLeuLysArgIleLysIleProAspTyrSerAspSerPheLysIleLysHisLeuGlyLysG

EcoRI (832)
801 GGCATTATAGCTTCTACAGCATGGACATCCGTGAATCCAGCTTCCAGTTCAGATTAAGCATGGTGCCCAATGTGGGCCTTAAGTTCTCCATCAGCAA
80▶IyHisTyrSerPheTyrSerMetAspIleArgGluPheGlnLeuProSerSerGlnIleSerMetValProAsnValGlyLeuLysPheSerIleSerAs

BsrBI (954)
901 CGCCAATATCAAGATCAGCGGAAATGGAAGGCACAAAAGAGATTCTTAAAAATGAGCGCAATTTTGATCTGAGCATAGAAGGCATGTCCATTTCCGGCT
113▶nAlaAsnIleLysIleSerGlyLysTrpLysAlaGlnLysArgPheLeuLysMetSerGlyAsnPheAspLeuSerIleGluGlyMetSerIleSerAla

ApaLI (1084)
1001 GATCTGAAGTGGGCGAGTAACCCACGTCAGGCAAGCCACCATCACCTGCTCCAGCTGCAGCAGCCACATCAACAGTGTCCACGTGCACATCTCAAAGA
147▶AspLeuLysLeuGlySerAsnProThrSerGlyLysProThrIleThrCysSerSerCysSerSerHisIleAsnSerValHisValHisIleSerLysS

BstBI (1151)
1101 GCAAAGTGGGGTGGCTGATCCAACCTCTCCACAAAAAATTGAGTCTGCGCTTCAAACAAAGATGAACAGCCAGGTCTGCGAGAAAGTGACCAATTCTGT
180▶erLysValGlyTrpLeuIleGlnLeuPheHisLysLysIleGluSerAlaLeuArgAsnLysMetAsnSerGlnValCysGluLysValThrAsnSerVa
1201 ATCCTCCAAGCTGCAACCTTATTTCCAGACTCGCCAGTAAATGACCAAAATAGATTCTGTGGCTGGAATCAACTATGGTGTGGCGCACCTCCAGCAAC
213▶IleSerSerLysLeuGlnProTyrPheGlnThrLeuProValMetThrLysIleAspSerValAlaGlyIleAsnTyrGlyLeuValAlaProProAlaThr

BsrGI (1317)
1301 ACGGCTGAGACCCCTGGATGTACAGATGAAGGGGAGTTTTACAGTGAAGACCACCACAATCCACCTCCCTTTGCTCCACCAGTGATGGAGTTTCCCGCTG
247▶ThrAlaGluThrLeuAspValGlnMetLysGlyGluPheTyrSerGluAsnHisHisAsnProProPheAlaProProValMetGluPheProAlaA

BstXI (1464)
1401 CCCATGACCGCATGGTATACCTGGGCTCTCAGACTACTTCTTCAACACAGCCGGCTTGTATACCAAGAGGCTGGGGTCTTGAAGATGACCCCTAGAGA
280▶IleHisAspArgMetValTyrLeuGlyLeuSerAspTyrPhePheAsnThrAlaGlyLeuValTyrGlnGluAlaGlyValLeuLysMetThrLeuArgAs

Bsu36I (1561) **BsaBI (1593)**
1501 TGACATGATTCCAAAGGAGTCAAATTTGACTGACAACCAAGTTCTTGGAACTTCTACCTGAGGTGGCCAAGAAGTTTCCAACATGAAGATACAG
313▶pAspMetIleProLysGluSerLysPheArgLeuThrThrLysPhePheGlyThrPheLeuProGluValAlaLysLysPheProAsnMetLysIleGln

StuI (1679) **XcmI (1697)**
1601 ATCCATGTCTCAGCTCCACCCCGCACCTGTCTGTGACGCCACCGGCTTACCTTCTACCTGCCGTGGATGTCCAGGCCTTTGCCGCTCCCTCCCA
347▶IleHisValSerAlaSerThrProProHisLeuSerValGlnProThrGlyLeuThrPheTyrProAlaValAspValGlnAlaPheAlaValLeuProA

SphI (1730) **NcoI (1748)**
1701 ACTCCTCCCTGGCTTCCCTCTTCTGATTTGGCATGCACACAATGGTTCCATGGAGGTGAGCGCCGAGTCCAACAGGCTTGTGGAGAGCTCAAGCTGGA
380▶snSerSerLeuAlaSerLeuPheLeuIleGlyMetHisThrThrGlySerMetGluValSerAlaGluSerAsnArgLeuValGlyGluLeuLysLeuAs

BspHI (1865)
SspI (1828) **EcoRV (1861)**
1801 TAGGCTGCTCCTGAACTGAAGCACTCAAATATTGGCCCTTCCCGTTGAATTGCTGAGGATATCATGAACACTATTGTACCCATTCTTGTCTGCC
413▶pArgLeuLeuLeuGluLeuLysHisSerAsnIleGlyProPheProValGluLeuLeuGlnAspIleMetAsnTyrIleValProIleLeuValLeuPro

HpaI (1903) **XmnI (1920)** **NgoMI (1941)**
NaeI (1941)
1901 AGGTTAACGAGAACTACAGAAAGGCTTCCCTCTCCGACGCGGCCAGAGTCCAGCTTACAACGTAGTGCTTCCAGCTCACCAGAACTTCTGCTGT
447▶ArgValAsnGluLysLeuGlnLysGlyPheProLeuProThrProAlaArgValGlnLeuTyrAsnValValLeuGlnProHisGlnAsnPheLeuLeuP

NheI (2037)
Tth111I (2008) **XcmI (2031)**
2001 TCGGTGCAGACGTTGTCTATAAATGAAGCACCAGGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAATGCAG
480▶heGlyAlaAspValValTyrLys•••

HpaI (2175) **MfeI (2186)**
2101 TGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACCAAGTTAAACAACAATTGCATTATT

EcoRI (2271)
2201 TTATGTTTCAGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTT

2301 TAACCTCAAATCAAGCCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCAATGTGCATTAGCTGTTGCAGCCT

2401 CACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCCACATTCCC

2501 TTTTGTAGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAAAATAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATA

2601 TCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTCTGGTGTACTTGA
141 •••AsnArgThr TyrLysLe

2701 GGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACAT
134 uProlLeuGluGluLeuThrThrLysValLeuLysGlyAsnMetGluLeuValPheCysAspProAlaTyrAspSerIleLeuGluArgCysMet

2801 GCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACA
101 GlyCysProSerValValArgIleSerArgAspValGluAspSerTyrProHisArgValAlaValIleThrAspPheAspLysGlnGlyAsnSerValAla

2901 GCAGACCAATGGCAATGGCTTCAGCACAGACAGTGCCTGCCAATGTAGGCCCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGG
67 IlaSerGlyIleAlaIleAlaGluAlaCysValThrValArgGlyIleTyrAlaGluIleHisValAlaSerIleIleGluGlyThrLysThrArgIleAla

3001 CCGCCCCGACATGGTCTTGTTCCTCATAGAGCATGGTGTCTTCTCAGTGGCAGCTCCACCAGTCCAGATCCTGCTGAGAGATGTTGAAGGTCTT
34 AlaGlyValHisHisLysAsnAspGluTyrLeuMetThrIleLysGluThrAlaValGluValLeuGluLeuAspGlnGlnSerIleAsnPheThrLys

3101 CATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTG
1 Met

3201 ACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAG

3301 TCCCGTTGATTTACTAGTCAAAAACAACTCCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATG

3400 TACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCC

3500 AGGCGGGCATTACCCTGATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCGATTTACCCTAAATACTCCAC

3600 CCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGG

3700 CCATTTACCGTAAGTTATGTAACGCTG CAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTCTG
SdaI (3723)PaeI (3731) BspLU11I (3741)

3798 GCGTTTTCCATAGGCTCCGCCCCCTGACGAGCATCAAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGT

3898 TTCCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGCTTACCGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGCTTTCTCA

3998 TAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTCCAGCCGACCGCTGCGCTTATCC

4098 GGTAACATATCGTCTTGTAGTCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTG

4198 CTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGT

4298 TGGTAGCTCTTGATCCGGCAAACAACCCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGAT

4398 CCTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCG
PaeI (4471) SmaI (4480) NotI (4490)

4498 CAATAAAATATCTTTATTTTATTACATCTGTGTGGTTTTTTTGTGTAATCGTAACATAACGCTCTCCATCAAAAACAAACGAAACAAAACAAA

4598 CTAGCAAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA