



100
|-----|

PvuI (8)
SgfI (7) **AgeI (90)** **EcoNI (97)**
GGATCTCGGATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACCGGTGCCTA
GAGAAGGTGGCGGGGTAAACTGGAAAAGTATGTCGTGTACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

HindIII (246) **Bsu36I (292)**
Psp1406I (204) **PvuII (240)** **EcoNI (288)**
GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCGAGGGGCTCGCATCTCTCTTTCACGGCCCGCCGCTACCTGAGGCC
GCCATCCACGCCGTTGAGTCCGCTTTCGCCGCTCCCGCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTAAAGCTCAGGTCGAGACC

NaeI (442)
GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

KasI (536) **AgeI (553)** **BspHI (569)** **BssHII (586)**
AscI (585)
TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCCGCTACCTGAGATCACCGGTAGGAGGGCCATCATGAGAGCCCTGTCGGCCGCTTCTCT
▶MetArgAlaLeuLeuAlaArgLeuLeuLeu
BspLU11I (682) **ScaI (698)**
TGCCTCTGGTGTGAGCGACTCAAAGGCAGCAATGAACTTCATCAAGTTCCATCGAACTGTGACTGTCTAAATGGAGGAACATGTGTGTCCAACAAGT
▶CysValLeuValValSerAspSerLysGlySerAsnGluLeuHisGlnValProSerAsnCysAspCysLeuAsnGlyGlyThrCysValSerAsnLysT
ACTTCTCAACATTCAGTGGTCAACTGCCAAAGAAATTCGGAGGGCAGCACTGTGAAATAGATAAGTCAAAAACCTGCTATGAGGGGAATGGTCACTT
▶yrPheSerAsnIleHisTrpCysAsnCysProLysLysPheGlyGlyGlnHisCysGluIleAspLysSerLysThrCysTyrGlyGlyAsnGlyHisPh

NaeI (833) **BglIII (892)**
NeoI (827)
TTACCGAGGAAAGGCCAGCACTGACACCATGGGCCCGCCCTGCCTGCCCTGGAACCTGACCCTGTCCTTCAGCAAACCTACCATGCCACAGATCTGAT
▶eTyrArgGlyLysAlaSerThrAspThrMetGlyArgProCysLeuProTrpAsnSerAlaThrValLeuGlnGlnThrTyrHisAlaHisArgSerAsp

PvuII (907) **PstI (933)**
GCTCTTCAGCTGGGCCTGGGAAACATAAATTACTGCAGGAACCCAGACAACCGGAGGGCACCCCTGGTGTATGTGCAGGTGGGCCTAAAGCTGCTGTGCC
▶AlaLeuGlnLeuGlyLeuGlyLysHisAsnTyrCysArgAsnProAspAsnArgArgArgProTrpCysTyrValGlnValGlyLeuLysLeuLeuValG

FspI (1021) **NheI (1036)**
AAGAGTGCATGGTGCATGACTGCGCAGATGGATGAGCTAGCTCGACATGATAAGATACATTGATGAGTTTGGACAAACCACTAGAATGCAGTGA AAA
▶InGluCysMetValHisAspCysAlaAspGly•••

HpaI (1199)
AAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAACAAGT
SwaI (1297)
TAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTAGATCATT
PacI (1306) **BspLU11I (1316)**
AAATGTTAATTAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGA
CGAGCATCAAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTCCGCTCT
CCTGTTCCGACCTGCCGCTTACCGGATACCTGTCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCAATGCTCAGCTGTAGGTATCTCAGTTCGG

ApaI (1630)
TG TAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCAGAACCCCGCTTCAGCCGACCGCTGCGCCTTATCCGTAACATATCGTCTTGTAGTCCAACCCGCT
AAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAAC
TACGGCTACACTAGAAGACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGA AAAAGAGTTGGTAGCTCTTGTATCCGGCAAACAAACCA
CCGCTGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACCGCGCAAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACCG

PacI (2046) **BsrGI (2056)**
TCAGTGGAAACGAAAACCTCACGTTAAGGATTTTGGTCTAGGCTAGTTAATTAAGCTGTACACTGTGGAATGTGTGTCAGTTAGGGTGTGGAAAGTCCCCA
GGCTCCCAGCAGGCAGAAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCGAGTGTGAAAAGTCCCAGGCTCCCAGCAGGCAGAAGTATGCAA

NcoI (2292)
GCATGCATCTCAATTAGTCAGCAACCATAGTCCCGCCCTAACTCCGCCATCCCGCCCTAACTCCGCCAGTTCGCCCATTTCTCCGCCCATGGCTG

AvrII (2385)
StuI (2382)
ACTAATTTTTTTTTATTTATGAGAGGCCGAGGCCGCTCTGCCTCTGAGCTATTCCAGAAGTAGTGAGGAGGCTTTTTTGGAGGCTAGGCTTTTGCAA

SmaI (2406) **BbrPI (2443)** **AseI (2455)**
AAGCTCCCGGAGCTTGTATATCCATTTTCGGATCTGATcagCAGGTGTGACAATTAATCATCGGCATAGTATATCGGCATAGTATAATACGACAAGGT
▶XmnI (2516)
BspHI (2512)
GAGGAACATAATCATGAAGACCTTCAACATCTCTCAGCAGGATCTGGAGCTGGTGGAGGTGCCACTGAGAAGATCACCATGCTCTATGAGGACAACAAG
▶MetLysThrPheAsnIleSerGlnGlnAspLeuGluLeuValGluValAlaThrGluLysIleThrMetLeuTyrGluAspAsnLys
StuI (2662)
CACCATGTCGGGGCGCCATCAGGACCAAGACTGGGGAGATCATCTCTGCTGTCCACATTGAGGCTACATTGGCAGGGTCACTGCTGTGCTGAAGCCA
▶HisHisValGlyAlaAlaIleArgThrLysThrGlyGluIleIleSerAlaValHisIleGluAlaTyrIleGlyArgValThrValCysAlaGluAlaIle
BstXI (2791)
TTGCCATTGGGCTGCTGTGAGCAACGGGCAGAAGACTTTGACACCATTGTGGCTGTGAGCACCCTACTCTGATGAGGTGGACAGATCCATCAGGGT
▶IleAlaIleGlySerAlaValSerAsnGlyGlnLysAspPheAspThrIleValAlaValArgHisProTyrSerAspGluValAspArgSerIleArgVa

SacI (2826)

GGTCAGCCCCTGTGGCATGTGCAGAGAGCTCATCTCTGACTATGCTCCTGACTGCTTTGTGCTCATTGAGATGAATGGCAAGCTGGTCAAAAACCACCATT

▶ IValSerProCysGlyMetCysArgGluLeuI leSerAspTyrAlaProAspCysPheValLeuI leGluMetAsnGlyLysLeuValLysThrThrI le

EcoRI (2941)

SacI (2985)

GAGGAATCATCCCCCTCAAGTACACCAGGAACATAACCTGAATTCGCTAGAGGGCCCTATTCTATAGTGTACCTAAATGCTAGAGCTCGTGATCAGC

▶ GluGluLeuI leProLeuLysTyrThrArgAsn•••

CTCGACTGTGCCTTCTAGTTGCCAGCCATCTGTTGTTTGGCCCTCCCCGTCCTTCCTTGACCCTGGAAGGTGCCACTCCCCTGTCCTTTCTAATAA

AATGAGGAAATTGCATCGCATTGTCTGAGTAGGTGTCATTCTATTCTGGGGGGTGGGGTGGGGCAGGACAGCAAGGGGGAGGATTGGGAAGACAATAGCA

EagI (3228)

NotI (3227)

BsrBI (3225)

FspI (3205)

XhoI (3222)

GGCATGCGCAGGGCCAATTGCTCGAGCGGCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTTGTGTGAATCGTAACTAACATAC

GCTCTCCATCAAAACAAAACGAAACAAAACAAACTAGCAAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTCTCTATCGAA