



PvuI (11) EcoNI (101)  
 SgfI (11) MfeI (83) AgeI (90)  
 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACCGGTGCCTA  
 101 GAGAAGGTGGCGGGGTAAGTGGAAAGTGATGTCGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTCAGTAGTCGCC  
 HindIII (246) Bsu36I (293)  
 PvuII (242) EcoNI (292)  
 201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTTCACGCGCCCGCCCTACCTGAGGCC  
 301 GCCATCCACGCCGTTGAGTCGCGTTTCTGCCGCCCTCCCGCCTGTGGTGCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC  
 NaeI (444)  
 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT  
 KasI (536) AseI (561)  
 501 TCTGTTTGTCCGCGTTACAGATCCAAGCTGTGACCGCGCCTACAAACAGTAGTTGACAATTAATCATCGGCATAGTATATCGGCATAGTATAATACGAC  
 BbsI (629)  
 BspHI (618) XbaI (649)  
 601 TCACTATAGGAGGCCATGAAGACCTTCAACATCTCCAGCAGGATCTAGAATTAGTAGAAGTAGCGACAGAGAAGATTACAATGCTTTATGAGGAT  
 MetLysThrPheAsnIleSerGlnAspLeuGluLeuValGluValAlaThrGluLysIleThrMetLeuTyrGluAsp  
 BsrBI (716) BsiWI (727)  
 701 AATAAACATCATGTGGGAGCGGCAATTCGTACGAAAACAGGAGAAATCATTTCGCGAGTACATATTGAAGCGTATATAGGACGAGTAAGTGTGTCAG  
 28▶AsnLysHisHisValGluAlaAlaIleArgThrLysThrGluGluIleIleSerAlaValHisIleGluAlaTyrIleGluYargValThrValCysAlaG  
 BstBI (827)  
 801 AAGCATTGCGATTGGTAGTGCAGTTTCGAATGGACAAAAGGATTTTGACACGATTGTAGCTGTTAGACACCTTATTCTGACGAAGTAGATAGAAGTAT  
 61▶IuAlaIleAlaIleGlySerAlaValSerAsnGlyGlnLysAspPheAspThrIleValAlaValArgHisProTyrSerAspGluValAspArgSerIle  
 901 TCGAGTGGTAAGTCTTGTGGTATGTGTAGGGAGTTGATTCAGACTATGCACCAGATTGTTTTGTGTTAATAGAAATGAATGGCAAGTTAGTCAAACCT  
 94▶eArgValValSerProCysGlyMetCysArgGluLeuIleSerAspTyrAlaProAspCysPheValLeuIleGluMetAsnGlyLysLeuValLysThr  
 NheI (1051)  
 EcoRI (1045)  
 1001 ACGATTGAAGAACTATTCCACTCAAATATACCGAAATTAAGAATTTCGCTAGCTCGCATGATAAGATACATTGATGAGTTTGGCAAAACCAACT  
 128▶ThrIleGluGluLeuIleProLeuLysTyrThrArgAsn●●●  
 1101 AGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAG  
 HpaI (1216) MfeI (1225)  
 1201 CTGCAATAAAACAAGTTAAACAACAACAATTGCATTCAATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAA  
 PacI (1326)  
 SwaI (1316) BspLU11I (1332)  
 1301 TGTGGTAGATCCATTTAAATGTTAATTAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTCCATA  
 1401 GGCTCCGCCCCCTGACGAGCATCAAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGCGTTTCCCCTGGAAG  
 1501 CTCCTCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTG  
 1600 TAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCGACCCTGCGCTTATCCGGTAACCTATCGT  
 AlwNI (1748)  
 1700 CTTGAGTCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGATTCT  
 1800 TGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTG  
 1900 ATCCGGCAAAACAACACCCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTT  
 NsiI (2058) SspI (2091)  
 2000 TCTACGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGCATGAGACAATAACCCGTATAAATGCTTCAATAATATTGAAAA  
 2100 AGGAAGAGTATGAGTATTCACATTTCCGTGTCGCCCTTATTCCCTTTTTGCGGCATTTTGCCTTCTGTTTTGCTCACCCAGAAACGCTGGTGAAG  
 1▶MetSerIleGlnHisPheArgValAlaLeuIleProPhePheAlaAlaPheCysLeuProValPheAlaHisProGluThrLeuValLysV  
 2200 TAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTTACATCGAAGTGGATCTCAACAGCGGTAAGATCCTTGAGAGTTTTGCCCGGAAGACGTTT  
 31▶alLysAspAlaGluAspGlnLeuGluAlaArgValGluTyrIleGluLeuAspLeuAsnSerGlyLysIleLeuGluuSerPheArgProGluGluArgPh  
 2300 TCCAATGATGAGCACTTTAAAGTCTGCTATGTGGCGCGGATTTATCCCGTATTGACGCGGGCAAGGCAACTCGGTCGCCGATACACTATTCTCAG  
 64▶eProMetMetSerThrPheLysValLeuLeuCysGlyAlaValLeuSerArgIleAspAlaGlyGluGlnGluLeuGluYargArgIleHisTyrSerGln  
 ScaI (2415)  
 2400 AATGACTTGGTTGAGTACTACCAAGTACAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGTGCCATAACCATGAGTGATAACA  
 98▶AsnAspLeuValGluTyrSerProValThrGluLysHisLeuThrAspGlyMetThrValArgGluLeuCysSerAlaAlaIleThrMetSerAspAsnT  
 PvuI (2527)  
 2500 CTGCGGCAACTTACTTCTGACAACGATCGGAGACCGAAGGAGCTAACCGCTTTTTGCAACATGGGGATCATGAACTCGCTTGATCGTTGGGA  
 131▶hrAlaAlaAsnLeuLeuLeuThrThrIleGlyGlyProLysGluLeuThrAlaPheLeuHisAsnMetGlyAspHisValThrArgLeuAspArgTrpGlu  
 FspI (2673)  
 2600 ACCGGAGCTGAATGAAGCCATACCAACGACGAGCGTGACACCAGATGCTGTAGCAATGGCAACAAGTTGCGCAAACTATTAAGTGGCAACTACTT  
 164▶uProGluLeuAsnGluAlaIleProAsnAspGluArgAspThrThrMetProValAlaMetAlaThrThrLeuArgLysLeuLeuThrGluGluLeuLeu  
 AseI (2721)

2700 AC T C I A G C I I C C C G G C A A C A A I I A A T A G A C T G G A I G G A G G C G G A I A A A G I T G C A G G A C C A C I T C I G C G C I C G G C C C I T C C G G C I G G C I G G I I I A I I G C I G  
198▶ Thr LeuAl aSer ArgGl nGl nLeuI leAspTrpMetGl uAl aAspLysValAl aGl yProLeuLeuArgSerAl aLeuProAl aGl yTrpPheI leAl aA  
2800 A T A A A T C T G G A G C C G G T G A G C G T G G G T C T C G C G G T A T C A T T G C A G C A C T G G G G C C A G A T G G T A A G C C C T C C C G T A T C G T A G T T A T C T A C A C G A C G G G G A G  
231▶ spLysSer Gl yAl aGl yGl uArgGl ySer ArgGl yI leI leAl aAl aLeuGl yProAspGl yLysProSerArgI leVal Val I I leTyrThr Thr Gl ySe  
2900 T C A G G C A A C T A T G G A T G A A C G A A A T A G A C A G A T C G C T G A G A T A G G T G C C T C A C T G A T T A A G C A T T G G T A A C T G T C A G A C C A A G T T T A C T C A T A T A T A C T T  
264▶ r Gl nAl aThr MetAspGl uArgAsnArgGl nI leAl aGl uI leGl yAl aSer LeuI leLysHisTrp●●●  
NsiI (3070)  
3000 T A G A T T G A T T T A A A A C T T C A T T T T T A A T T T A A A A G G A T C T A G G T G A A G A T C C T T T T T G A T A A T C T C A T G C A T G A C A T T A A C C T A T A A A A A T A G G C G T A T C  
EcoO109I (3104)  
3100 A C G A G G C C C T T T T C G T C T C G C G C G T T T C G G T G A T G A C G G T G A A A A C C T C T G A C A C A T G C A G C T C C C G G A G A C G G T C A C A G C T T G T C T G T A A G C G G A T G C C G  
NdeI (3299)  
3200 G G A G C A G A C A A G C C C G T C A G G G C G C T C A G C G G G T G T T G G C G G G T G T C G G G G C T G G C T T A A C T A T G C G G C A T C A G A G C A G A T T G T A C T G A G A G T G C A C C A  
EagI (3320)  
NotI (3320)  
BsrBI (3316)  
BstEII (3303)XhoI (3314)  
3300 T A T G G T G A C C G G A T C T C G A G C G G C C G C A A T A A A A T A T C T T T A T T T T C A T T A C A T C T G T G T G T T G G T T T T T G T G T A A T C G T A A C T A A C A T A C G C T C T C C  
3400 A T C A A A A C A A A A C G A A A C A A A A C A A A C T A G C A A A A T A G G C T G T C C C C A G T G C A A G T G C A G G T G C C A G A A C A T T T C T C T A T C G A A