



100

PvuI (7)
SgfI (6) **MfeI (82)**
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGTGTCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)**
PvuII (239) **Bsu36I (291)**
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441) **NaeI (441)**
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

KasI (535) **NcoI (560)**
BstEII (555) **AgeI (552)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTCTGAGATCACCGGTACCACCATGGAGGCTCCCGCACCGTCCCTCACGGAGGAGGATTT
601 GACTGAAGTGAAGAAGGACGCTTTAGAGAATTTACGTGTTTACCTGTGTGAGAAAATCATAGCTGAGAGACATTTTGTATCTACTCGTCAAAAAATA
13▶uThr Gl uVal LysLysAspAl aLeuGl uAsnLeuArgVal TyrLeuCysGl uLys I l e l eAl aGl uArgHl sPheAspHl sLeuArgAl aLysLys I l e
701 CTAAGTAGAGAAGACACAGAAGAAATTTCTTGCCGAACCTCAAGTAGAAAACGGGCTGGGAAGTTGTTAGACTACTTACAGGAGAACCCAGGGGCTGG
47▶LeuSer ArgGl uAspThr Gl uGl u l l eSer CysArgThr Ser Ser ArgLysArgAl aGl yLysLeuLeuAspTyrLeuGl nGl uAsnProArgGl yLeuA
BstXI (788)
801 ACACCCTGGTGAATCCATCCGCAGGGAGAAAACACAGAGCTTCTGATTGAGAAGATAACGGATGAGGTGCTAAAGTTCGGAATATAAACTGGAGCA
80▶spThr LeuVal Gl uSer l l eArgArgGl uLysThr Gl nSer PheLeu l l eGl nLys l l eThrAspGl uVal l LeuLysLeuArgAsn l l eLysLeuGl uHl
SmaI (906) **PvuII (921)**
901 CCTCAAAGCCTGAAGTGCAGCAGCTGTGAGCCCTTTGCAGCCGGAGCCACCAACACCTCTCTAGGTGCAATTCCGATGAGAGCAATCTCTCTGAGAAA
113▶sLeuLysGl yLeuLysCysSer Ser CysGl uProPheAl aAl aGl yAl aThrAsnAsnLeuSer ArgCysAsnSerAspGl uSerAsnLeuSer Gl uLys
1001 CAGAGAGCATCCACTGTCATGTACCACCGGAGGGAGAGTCCAGCAGGCTCCCTTCTCTATGGCGTCGTCCTGAACTTCCAGTCTGGAAAGTTG
147▶Gl nArgAl aSer Thr Val MetTyrHl sProGl uGl yGl uSer Ser Thr Al aProPhePheSer MetAl aSer Ser LeuAsnLeuProVal l LeuGl uVal l G
SandI (1148)
1101 GCAGGACTGAAAACAGCAGCTTCTCTTCCAGCCACTTCTCTGACCTGGGACCTGGGGCTCCCTTTGCCCCAGACCTTCGTTGGAAGAGGGGGG
180▶l yArgThr Gl uAsnSer Ser PheSer Ser Al aThr LeuProArgProGl yAspProGl yAl aProProLeuProPProAspLeuArgLeuGl uGl uGl yGl
SpeI (1286)
1201 AAGTTGTGAAAACCAAGTGAAGTGTCTCCCTTACGGTACGGGCTCTTTCACGCCAATGATACATCACCGCCTAGTTGTTTTACTAGTGATGCAAA
213▶ySer CysGl yAsnSer Ser Gl uMetPheLeuProLeuArgSerArgAl aLeuSer ArgGl n●●●

MscI (1330) **NheI (1324)**
1301 ATGCTGTGAAGGAGGCCATCTTTCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAATGCAGTGAATAAATGCCT

HpaI (1462) **MfeI (1473)**
1401 TTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACATTATAAGCTGCAATAAACAAGTTAAACAACAACCAATTGCATTATTTATGTTTCAGGT

EcoRI (1558)
1501 TCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACTCCAAATC
1601 AAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTCAT

SspI (1797)
1701 GGAGTTTAAAGATAGTGTATTTTCCCAAGTTTGAACCTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATCCCTTTTTAGTAAAT

SwaI (1811)
1801 ATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAG
1901 TAGTTGGACTTAGGGAACAAAGAACCTTAAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTACTTGGGGGATGAGTTC
141▶●●●AsnArgThr TyrLysLeuPro l l eLeuGl u
SacI (2072)
2001 CTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTG
130▶Gl u l l eThr Thr LysVal l LeuLysGl yAsnMetGl u l l eLeuVal l PheCysAspProAl aTyrAspSer l l eLeuGl uArgCysMetGl yCysProSer V
BstXI (2101)
2101 ACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCAATGG
96▶al Val l Arg l l eSer ArgAspVal Gl uAspSer TyrProHl sArgValAl aVal l l eThrAspPheAspLysGl nGl yAsnSer ValAl aSer Gl y l l eAl
SmaI (2236)
2201 CAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGCCTCAATGTGGACAGCAGAGATGATCTCCCACTTGGTCTGATGGCCGCCCGACATG
63▶al l eAl aGl uAl aCysVal l Thr Val l ArgGl y l l eTyrAl aGl u l l eHl sValAl aSer l l e l l eGl uGl yThr LysThrArg l l eAl aAl aGl yVal l Hl s
BspHI (2386)
XmnI (2378)
2301 GTGCTTGTTCCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTC
30▶Hl sLysAsnAspGl uTyrLeuMetThr l l eLysGl uThrAl aVal l Gl uVal l LeuGl uLeuAspGl nGl nSer l l eAsnPheThr LysMet▶

2401 **AseI (2444)**
CTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTATCTGACGGTTCCTAA

SacI (2501) SpeI (2599)
2501 CGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTGGAAAGTCCCGTTGATTA

2601 **CTAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAACCG**

SnaBI (2727)
2701 CATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTA

NdeI (2832)
2801 CCGTCATTGACGTCAATAGGGGCGTACTTGCCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAAT

2901 GGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAG

PstI (3011)
SdaI (3010) **PacI (3018)** **BspLU11I (3028)**
3001 TTATGTAACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGTTGCTGGCGTTTTCCATAG

3099 GCTCCGCCCCCTGACGAGCATCAGAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTCCCCCTGGAAGC

3199 TCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTA

ApaLI (3342)
3299 GGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAGCTGGGCTGTGTGCACGAACCCCCGTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCT

3399 TGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCTGTTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTG

3499 AAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGAT

3599 CCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTC

EagI (3778)
PacI (3758) **SwaI (3767)** **NotI (3777)**
3699 TACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTT

3799 TATTTTCATTACATCTGTGTGTTGGTTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGC

3899 TGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA