

PvuI (7)
SgfI (6)
MfeI (82) **EcoNI (96)**

1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTCTCCGCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
HindIII (245) **Bsu36I (291)**

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NgoMI (441)
NaeI (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTGTTTCGTTT

KasI (535) **AgeI (552)** **BspHI (560)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGCATCATGAAGTCCAGCGGCCTTTCCCTTCTGGTGTCTGTCT
 601 TGCCTGGAACTCTGGCACCTTGGGCTGTGGAAGGCTCTGGAAAGTCTTCAAAGCTGGAGTCTGCTCCTAAGAAATCTGCCAGTGCCTTAGATAC
 13▶uAl aLeuGl yThr LeuAl aP rOT rPAl aVal l Gl uGl ySer Gl yLysSer PheLysAl aGl yVal l CysP rOP rOLysLysSer Al aGl nCysLeuArgTyr

BamHI (780)

701 AAGAACTGAGTGCAGAGTACTGGCAGTGTCCAGGAAGAAGAGATGTTGTCTGACACTTGTGGCATCAATGCCTGGATCTGTGACACCCCAA
 47▶LysLysP rOGl uCysGl nSerAspTrpGl nCysP rOGl yLysLysArgCysCysP rOAspThr CysGl y l l eLysCysLeuAspP rVal l AspThr P rOA
 801 ACCCAACAAGGAGGAAAGCTGGGAAGTGGCCAGTACTTATGGCAATGTTTGATGCTTAAACCCCAATTTCTGTGAGATGGATGGCCAGTGAAGCG
 80▶snP rOThr ArgArgLysP rOGl yLysCysP rOVal l Thr TyrGl yGl nCysLeuMe tLeuAsnP rOP rOAsnP heCysGl uMe tAspGl yGl nCysLysAr

HindIII (953) **NdeI (968)**

901 TGACTTGAAGTGTTCATGGGCATGTGTGGAAATCCTGCGTTTTCCCTGTGAAAGCTTGATTCTGCCATATGGAGGAGGCTCTGGAGTCTGCTCTGT
 113▶gAspLeuLysCysCysMe tGl yMe tCysGl yLysSer CysVal l Ser P rOVal l LysAl a●●●

EcoO109I (1007)
NheI (1045)

1001 GTGGTCCAGGTCTTTCCACCCTGAGACTTGGCTCCACCCTGATGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAAC

HpaI (1183) **MfeI (1194)**

1101 GAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAAACAACAAATG

EcoRI (1279)

1201 CATTCAATTTATGTTTCAGGTTACAGGGGAGGTGTGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAG
 1301 CAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTT
 1401 TGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAAATGCACTGACCTCCC

SspI (1518) **SwaI (1532)**
EcoO109I (1593)

1501 ACATTCCTTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCT
 1601 TCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGT

141▶●●●AsnArgThr
SacI (1793)

1701 GTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCT
 137▶TyrLysLeuP rOl l eLeuGl uGl u l l eThr Thr LysVal l LeuLysGl yAsnMe tGl u l l eLeuVal l P heCysAspP rAl aTyrAspSer l l eLeuGl uA

BstXI (1822)

1801 CTGCATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCCAATGGTGTCAAAGTCTTCTGCCCGT
 103▶r gCysMe tGl yCysP rOSer Val l Val Arg l l eSer ArgAspVal l Gl uAspSer TyrP rOH is ArgVal l Al aVal l l eThr AspP heAspLysGl nGl yAs

StuI (1957)
Eco147I (1957)

1901 TGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGT
 70▶nSer Val l Al aSer Gl y l l eAl a l l eAl aGl uAl aCysVal l Thr Val l ArgGl y l l eTyrAl aGl u l l eHi sVal l Al aSer l l e l l eGl uGl yThr LysThr

XmnI (2099)


2001 CCTGATGGCCGCCGACATGGTGTGTTGTCCCTCATAGAGCATGGTGTCTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTG
 37▶Arg l l eAl aAl aGl yVal l Hi sHi sLysAsnAspGl uTyrLeuMe tThr l l eLysGl uThr Al aVal l Gl uVal l LeuGl uLeuAspGl nGl nSer l l eAsnP

VspI (2165)
AseI (2165)

2101 AAGGTTCTCATGATGGCCCTCTATAGTGTGATCTATTACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAG
 3▶heThr LysMe t

SacI (2222)


2201 CT TATCTGACGGTTCATAAACGAGCTCTGCTTATATAGACCTCCCAACCGTACACGCTACCGCCCAATTTGCGTCAATGGGGCGGAGTTGTTACGACAT

2300 TTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGC
SpeI (2320) 

2399 CCATTGATGTACTGCCAAAACCGCATCATCATGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAGGTCATGTACTGGG
SnaBI (2448)
Eco105I (2448)

2499 CATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAA
NdeI (2553)

2599 ATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAG

2699 CCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTG CAG GTT AA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCC
PstI (2732) SdaI (2731)PacI (2739) BspLU11I (2749) 

2797 GCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGAT

2897 ACCAGGCGTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTCCGACCCTGCCGTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGC

2997 GCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGGTGATGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTTCAGCCGACCGCTGC
ApaLI (3063)

3097 GCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATG

3197 TAGGCGGTGCTACAGAGTTCCTGAAGTGGTGGCCAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGG

3297 AAAAAAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCT

3397 CAAGAAGATCCTTTGATCTTTTCTACGGGCTGTGACGCTCAGTGAACGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAAT
PacI (3479) SmaI (3488)

EagI (3499)
NotI (3498)

3497 CAGCGGCCCAATAAAATATCTTTATTTTCATTACATCTGTGTGGTTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAA
3596 ACAAACAAACTAGCAAATAGGCTGTCCCCAGTGAAGTGCAAGTGCCAGGTCCAGAACATTTCTATCGAA