



PvuI (7)
SgfI (6)
MfeI (82)

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Bsu36I (291)

Psp1406I (203)
PvuII (239)

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)

KasI (535)
AgeI (552)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCCACATGGAGGAAATGCCTTTGAGAGAATCAAGTCCTCAAAG
601 GGCAGAGAGGTGCAAGAAGTCATGGCTCTTGTGCATAGTGGCTCTGTTACTGATGTTGCTCTGTTCTTTGGGTACACTGATCTACTTCACTCAAGCCA
13▶ A E R C K K S W L L C I V A L L L M L L C S L G T L I Y T S L K P

DraIII (772)

701 ACTGCCATCGAGTCTGCATGGTTAAGTTTGAACATATCATCCTCAAATGGCACATGACATCTCCAAACCTCACTGTGTGAATACGACATCTGATGGGA
47▶ T A I E S C M V K F E L S S S K W H M T S P K P H C V N T T S D G

PstI (811)

801 AGCTGAAGATACTGCAGAGTGGCACATATTTAATCTACGGCCAAGTGATTCTGTGGATAAGAAATACATAAAAGACAATGCCCCCTTCGTAGTACAGAT
80▶ K L K I L Q S G T Y L I Y G Q V I P V D K K Y I K D N A P F V V Q I

SphI (975)

901 ATATAAAAAGAAATGATGTCTACAACTCTAATGAATGATTTTTCAAATCTTGCCTATAGGAGGGTTTATGAACCTGCATGCTGGAGATAACATATATCTG
113▶ Y K K N D V L Q T L M N D F Q I L P I G G V Y E L H A G D N I Y L
1001 AAGTTCAACTCTAAAGACCATATTCAGAAAACAAACATACTGGGGATCATCTTAATGCCTGATCTACCATTATCTCTTAGAGATTGGGTTTGGTCT
147▶ K F N S K D H I Q K T N T Y W G I I L M P D L P F I S •

MscI (1116)
NheI (1110)

1101 CCTCATCTTCGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACAGATAAGTGAATAAATGCTTTATTTGTGAAATT

HpaI (1248)
MfeI (1259)

1201 TGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACAAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGT

EcoRI (1344)

1301 GGGAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGA
1401 ATCCTTTTCTGAGGGATGAATAAGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTTCATGGAGTTTAAGATAT

SapI (1526)
SspI (1583)
SwaI (1597)

1501 AGTGTATTTTCCCAAGGTTTGAAGTCTCTTCAATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTCTAGTAAATATTCAGAAAATAATT

EcoO109I (1658)

1601 TAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGG
1701 GAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTT
141▶ • N R T Y K L P I L E E I T T K

SacI (1858)
BstXI (1887)

1801 TGACCAGCTTGCCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCATGCCACAGGGGCTGACCACCCTGATGGA
125▶ V L K G N M E I L V F C D P A Y D S I L E R C M G C P S V V R I S
1901 TCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCA
92▶ R D V E D S Y P H R V A V I T D F D K Q G N S V A S G I A I A E A

StuI (2022)

2001 CAGACAGTACCCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCCGACATGGTGTGTTGTCCCT
58▶ C V T V R G I Y A E I H V A S I I E G T K T R I A A G V H H K N D E

BbsI (2168)
XmnI (2164)

2101 CATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGT
25▶ Y L M T I K E T A V E V L E L D Q Q S I N F T K M

AseI (2230)
SacI (2287)

2201 ATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTAT

SpeI (2385)

2301 ATAGACCTCCCACGTACACGCCTACCGCCATTTGCGTCAATGGGGCGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAACAAAA
2401 CTCCCATGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATGTTAA

SnaBI (2513)
 2501 TAGCGATGACTAATACGTAGATGTAAGTCCCAAGTAGGAAAGTCCATAAGGTCATGTAAGTCCGAGGCGGGCCATTTACCGTCATTGACGTC

NdeI (2618)
 2601 AATAGGGGGCGTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCGAGTTTACCCTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATT

PstI (2797)
SdaI (2796)

2701 GCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTG

PacI (2804) BspLU11I (2814)
 2801 CAGGTTAATTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGAC

2901 GAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTC

3001 CTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGT

ApaLI (3128)

3101 GTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTA

3201 AGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACT

3301 ACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCAC

3401 CGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCT

EagI (3564)

PacI (3544) SwaI (3553) NotI (3563)

3501 CAGTGAACGAAAACACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTATTACATCT

3601 GTGTGTTGGTTTTTTGTTGTAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGT

3701 GCAGGTGCCAGAACATTTCTCTATCGAA