



PvuI (7)
SgfI (6)
1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) **PvuII (239)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCCTCCCGCCTGTGGTGCCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

NeoI (566)
BspEI (558)
501 TCTGTTCTGCGCGCTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGCTCCGGACACCATGGCTTTGCTTGGCTATCGGATGCTT
1 M A F V C L A I G C L

HpaI (661) **Bsu36I (670)** **BamHI (690)**
601 ATATACCTTTCTGATAAGCACAACTTTGGCTGTACTTTCATCTTCAGACACCGAGATAAAAAGTTAACCCCTCCTCAGGATTTGAGATAGTGGATCCCGGA
11 Y T F L I S T T F G C T S S S D T E I K V N P P Q D F E I V D P G
701 TACTTAGGTTATCTCTATTTGCAATGGCAACCCCACTGTCTCGGATCATTTAAGGAATGCACAGTGAATATGAACATAAATACCGAAACATTGGTA
45 Y L G Y L Y L Q W Q P P L S L D H F K E C T V E Y E L K Y R N I G

NeoI (895)
801 GTGAACATGGAAGACCATCATTACTAAGAATCTACATTACAAAGATGGGTTTGTCTTAAACAAGGCATTGAAGCGAAGATACACACGCTTTTACCATG
78 S E T W K T I I T K N L H Y K D G F D L N K G I E A K I H T L L P W

EcoRV (954) **EcoRI (968)**
901 GCAATGCACAAATGGATCAGAAGTTCAAAGTTCCTGGGCAGAACTACTTATTGGATATCACCAAGGAATCCAGAACTAAAGTTCAGGATATGGAT
111 Q C T N G S E V Q S S W A E T T Y W I S P Q G I P E T K V Q D M D
1001 TGGGTATATTACAATTGGCAATATTTACTCTGTCTTGGAAACCTGGCATAGGTGACTTCTTGATAACCAATTACAACCTGTTTTACTGGTATGAGGGCT
145 C V Y Y N W Q Y L L C S W K P G I G V L L D T N Y N L F Y W Y E G

NsiI (1106)
1101 TGGATCATGCATTACAGTGTGTTGATTACATCAAGGCTGATGGACAAAATATAGGATGCAGATTTCCCTATTTGGAGGCATCAGACTATAAAGATTTCTA
178 L D H A L Q C V D Y I K A D G Q N I G C R F P Y L E A S D Y K D F Y
1201 TATTTGTGTTAATGGATCATCAGAGAACAAGCCTATCAGATCCAGTTATTTCACTTTTTCAGCTTCAAAATATAGTTAAACCTTTGCCGCCAGTCTATCTT
211 I C V N G S S E N K P I R S S Y F T F Q L Q N I V K P L P P V Y L

EcoO109I (1353)
1301 ACTTTTACTCGGGAGAGTTCATGTGAAATTAAGCTGAAATGGAGCATACTTTGGGACATTTCCAGCAAGGTGTTTTGATTATGAAATTGAGATCAGAG
245 T F T R E S S C E I K L K W S I P L G P I P A R C F D Y E I E I R
1401 AAGATGATACTACCTTGGTGACTGCTACAGTTGAAATGAAACATACACCTTGAACCAACAAATGAAACCCGACAATTATGCTTTGTAGTAAGAAGCAA
278 E D D T T L V T A T V E N E T Y T L K T T N E T R Q L C F V V R S K
1501 AGTGAATATTTATGCTCAGATGACGGAATTTGGAGTGAAGTGGAGTGATAAACAATGCTGGGAAGGTGAAGACCTATCGAAGAAAACCTTTGCTACGTTTC
311 V N I Y C S D D G I W S E W S D K Q C W E G E D L S K K T L L R F

AgeI (1642)
1601 TGGCTACCATTTGGTTTCATCTTAATATTAGTTATATTTGTAACCGGCTGCTTTTGGCGTAAGCCAAACCTACCCAAAATGATTCCAGAATTTTTCT
345 W L P F G F I L I L V I F V T G L L L R K P N T Y P K M I P E F F

XmnI (1709) **NheI (1735)** **MscI (1741)**
1701 GTGATACATGAAGACTTTCCATATCAAGAGACATGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTG
378 C D T •

HpaI (1873)
1801 AAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACATTCATTCTTTT

EcoRI (1969)
1901 ATGTTTCAGGTTCCAGGGGAGGTGTGGGAGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAAATACAGCATAGCAAACTTTA
2001 ACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCA

SapI (2151)
2101 CCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTGCTTCTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTT

Swal (2222) **EcoO109I (2283)**
2201 TTTAGTAAAAATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATC
2301 CCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGG
141 N R T Y K L

SacI (2483)
2401 GGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGC
133 P I L E E I T T K 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

BstXI (2512)
2501 CACAGGGCTGACCAACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGC
100 C P S V V R I S 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

StuI (2647)

2601 AGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGCTCTGATGGCC
67 S G I A I A E A 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

XmnI (2789)

2701 GCCCCGACATGGTGTCTTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGGTCTTCA
33 A G V H H K N D E 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 (2855)

2801 TGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGAC
0

SacI (2912)

2901 GGTTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCATTTCGCTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTC

SpeI (3010)

3001 CCGTTGATTTACTAGTCAAACAAACTCCCATTTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAC

SnaBI (3138)

3101 TGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTAAGTGGCATAATGCCAGG

NdeI (3243)

3201 CGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGTACTGCTCAAGTGGGCGAGTTTACCGTAAATACTCCACCCA
3301 TTGACGTCAATGGAAAGTCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGCGGGCCA

PacI (3429)

PstI (3422)

SdaI (3421)

BspLU11I (3439)

3401 TTTACCGTAAGTTATGTAACGCTGCGAGGTTAATAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGAACCGTAAAAAGCCGCTTGGTGGCGTT
3501 TTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCC
3601 CCTGGAAGCTCCCTCGTGCCTCTCTGTTCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTCTCCCTTCGGAAGCGTGGCGCTTCTCATAGCT

ApaLI (3753)

3701 CACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAGCCCGACCGCTGCGCCTTATCCGGTAA
3801 CTATCGTCTTGTGTCACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACA
3901 GAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTA
4001 GCTCTTGATCCGGCAAACAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTT

EagI (4189)

PacI (4169) SwaI (4178) **NotI (4188)**

4101 GATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATA

4201 AAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAAACTAGC
4301 AAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA