



PvuI (7)
SgfI (6) **MfeI (82)**
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATGCCACAGTCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

HindIII (245)

Psp1406I (203) **PvuII (239)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACACGCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC
401 GGGCCTTTGTCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560)
BstEII (555) **AgeI (552)** **SacII (568)** **BssHII (577)**
501 TCTGTTCTGGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATTGGCCCCGGCGGGCGCGGGTCCGGACCTCGG
1▶ M A P R R A R G C R T L G

SgrAI (635) **BbrPI (654)**
EagI (631) **BstAPI (650)** **BstXI (668)**
601 TCTCCCGGCGTGTACTGCTGCTGCTGCTCCTGGCCGGCGGACGCGGGGCATCACGTGCCCTCCCCCATGTCGTTGGAACACGCAGACATCTGGGTC
13▶ L P A L L L L L L L R P P A T R G I T C P P P M S V E H A D I W V

BsrBI (724)
701 AAGAGCTACAGCTTGTACTCCAGGAGCGGTACATTTGTAAGTCTGGTTCAAGCGTAAAGCCGGCAGTCCAGCCTGACGGAGTGCCTGTTGAAACAAG
47▶ K S Y S L Y S R E R Y I C N S G F K R K A G T S S L T E C V L N K

NsiI (837)
801 CCACGAATGTCGCCCACTGGACAACCCCAAGTCTCAAATGCATTAGAGACCCTGCCCTGGTTCACCAAAGGCCAGCGCCACCCTCCACAGTAACGACGGC
80▶ A T N V A H W T T P S L K C I R D P A L V H Q R P A P P S T V T T A

BstEII (903)
901 AGGGGTGACCCACAGCCAGAGAGCCTCTCCCCTTCTGGAAAAGACGCCGAGCTTCATCTCCAGCTCAAACAACACAGCGCCACAACAGCAGCTATT
113▶ G V T P Q P E S L S P S G K E P A A S S P S S N N T A A T T A A I

XmaI (1002) **PvuII (1012)** **BspHI (1062)**
1001 GTCCCGGCTCCAGCTGATGCCTTCAAATCACCTTCCACAGGAACACAGAGATAAGCAGTCATGATCCTCCACGGCACCCCTCTCAGACAACAG
147▶ V P G S Q L M P S K S P S T G T T E I S S H E S S H G T P S Q T T
1101 CCAAGAACTGGAACTCACAGCATCCGCTCCACCAGCGCCAGGTGTATCCACAGGGCCACAGCGACCACTGTGGCTATCTCCACGTCCTACTGT
180▶ A K N W E L T A S A S H Q P P G V Y P Q G H S D T T V A I S T S T V

Eco47III (1216) **SphI (1234)** **XcmI (1271)** **MscI (1268)** **NcoI (1289)**
1201 CCTGCTGTGGGCTGAGCGCTGTGTCTCTCCTGGCATGCTACCTCAAGTCAAGGCAAATCCCCGCTGGCCAGCGTTGAAATGGAAGCCATGGAGGCT
213▶ L L C G L S A V S L L A C Y L K S R Q T P P L A S V E M E A M E A

MscI (1394)
NheI (1388)

BbsI (1333) **Eco47III (1385)**
1301 CTGCCGTGACTTGGGGACCAGCAGCAGAGATGAAGACTTGGAAAAGTCTCTCACCACCTATGAAACTCGGGAAACCAGCCAGCGCTAGCTGGCCA
247▶ L P V T W G T S S R D E D L E N C S H H L •

1401 GACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTG

HpaI (1526) **MfeI (1537)**
1501 TAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCTTTATGTTTCAGGTTTCAGGGGGAGGTGGGGAGGTTTTTAAAGCAAGTA

EcoRI (1622)
1601 AAACCTCTACAAATGTGGTATGGAATTCATAAATACAGCATAGCAAACTTTAACCTCATAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATA
1701 AGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGA

SapI (1804) **SspI (1861)** **SwaI (1875)**
1801 ACTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAA

EcoO109I (1936)
1901 AATAATGTTTTTTATTAGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGA
2001 AATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTATCTC
141▶ N R T Y K L P I L E E I T T K V L K G N M E

SacI (2136) **BstXI (2165)**
2101 AATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATGATGTCACCTCATCAGAGTAG
118▶ 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 R D V E D S Y
2201 GGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGACCTGCCAATGT
84▶ 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 C V T V R G I Y

StuI (2300)
2301 AGGCCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGCGCCCGCACATGGTGCTTGTGCTCATAGAGCATGGTATCTTCTC
51▶ 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 Y L M T I K E

BbsI (2446)
XmnI (2442)

2401 AGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTA
18 T A V E V L E L D Q Q S I N F T K M

AseI (2508) SacI (2565)

2501 TGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCTACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGC

SpeI (2663)

2601 CTACCGCCATTGCGTCAATGGGGCGGAGTTGTTACGACATTTGGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCCATTGACGTCAATGGGGT

SnaBI (2791)

2701 GGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGAT

NdeI (2896)

2801 GTACTGCCAAGTAGGAAAGTCCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATA

2901 TGATACACTTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACG

PacI (3082)
PstI (3075)
SdaI (3074) **BspLU11I (3092)**

3001 TCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATTAAGAACATGTGA
CTGCAGGTTAATTAAGAACATGTGA

3101 GCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCT

3201 CAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGCTTAC

3301 CGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCTCCAAGCTG

ApaLI (3406)

3401 GGCTGTGTGCACGAACCCCGTTCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGG

3501 CAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGTACACTAGAAGAACAGT

3601 ATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTT

3701 GTTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACTCACGTT

EagI (3842)
PacI (3822) SwaI (3831) **NotI (3841)**

3801 AAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAA

3901 TCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAAGTGCAGGTGCCAGAACATTTCTCT

4001 ATCGAA