



PvuI (7)
SgfI (6)

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Bsu36I (291)
HindIII (245)
EcoNI (287)
Psp1406I (203)

201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGCTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

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

501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCATCATGACTATGGAGACCCAAATGTCTCAGAATGTATGTCC
 601 CAGAAACCTGTGGCTGCTTCAACCATTGACAGTTTGTGCTGCTGGCTTCTGCAGACAGTCAAGTGCAGCTCCCCCAAAGGCTGTGCTGAAACTTGA
 13▶ R N L W L L Q P L T V L L L A S A D S Q A A A P P K A V L K L E
 700 GCCCCGTTGGATCAACGTCTCAGGAGGACTCTGTGACTGTGACATGCCAGGGGCTCGCAGCCCTGAGAGCGACTCCATTAGTGTTCACAATGGG
 46▶ P P W I N V L Q E D S V T L T C Q G A R S P E S D S I Q W F H N G
BbrPI (867) **MscI (879)**

800 AATCTCATTCCCACCCACAGCGCCAGCTACAGGTTCAAGGCCAACAAACATGACAGCGGGGAGTACAGTCCAGACTGGCCAGACCAGCCTCAGCG
 80▶ N L I P T H T Q P S Y R F K A N N N D S G E Y T C Q T G Q T S L S
 900 ACCCTGTGCATCTGACTGTGCTTCCGAATGGCTGGTGTCCAGACCCCTCACCTGGAGTTCCAGGAGGGAGAAACCATCATGCTGAGGTGCCACAGCTG
 113▶ D P V H L T V L S E W L V L Q T P H L E F Q E G E T I M L R C H S W

BamHI (1065) **XcmI (1095)**

1000 GAAGGACAAGCCTCTGGTCAAGGTCACATTCTCCAGAATGGAAAATCCAGAAATCTCCCGTTTGGATCCCACCTTCTCCATCCCACAAGCAAACCAC
 146▶ K D K P L V K V T F F Q N G K S Q K F S R L D P T F S I P Q A N H
SapI (1196)

1100 AGTCACAGTGGTATTACACTGCACAGGAAACATAGGCTACACGCTGTTCTCATCCAAGCCTGTGACCATCACTGTCCAAGTGGCCAGCATGGGCAGCT
 180▶ S H S G D Y H C T G N I G Y T L F S S K P V T I T V Q V P S M G S
 1200 CTTACCAATGGGATCATTGTGGCTGTGGTCACTGCGACTGCTGTAGCAGCCATTGTTGCTGTAGTGGCCTTGATCTACTGCAGGAAAAAGCGGAT
 213▶ S S P M G I I V A V V I A T A V A A I V A A V A L I Y C R K K R I
BsaBI (1359)

1300 TTCAGCCAATCCACTGATCCTGTGAAGGCTGCCAATTTGAGCCACCTGGACGTCAAATGATTGCCATCAGAAAAGAGACAACCTGAAGAAACCAACAAT
 246▶ S A N S T D P V K A A Q F E P P G R Q M I A I R K R Q L E E T N N
AvrII (1438) **Tth111I (1492)**

1400 GACTATGAAACAGCTGACGGCGCTACATGACTCTGAACCCTAGGGCACCTACTGACGATGATAAAAACATCTACCTGACTCTTCTCCCAACGACCATG
 280▶ D Y E T A D G G Y M T L N P R A P T D D D K N I Y L T L P P N D H
MscI (1547)

1500 TCAACAGTAATAACTAAAGAGTAACGTTATGCCATGTGGTCAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAA
 313▶ V N S N N •

HpaI (1679) **MfeI (1690)**

1600 TGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAATTGCAT

EcoRI (1775)

1700 TCATTTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAA
 1800 AACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTGC

SapI (1957)

1900 AGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTGCTCTTCATTCTTTATGTTTTAAATGCACTGACCTCCACA

SspI (2014) **SwaI (2028)** **EcoO109I (2089)**

2000 TTCCCTTTTATAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCA
 2100 TAATATCCCCAGTTTAGTGTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTGA
 141▶ • N R T Y
SacI (2289)

2200 CTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTG
 136▶ K L 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
BstXI (2318)

2300 CACATGCCACAGGGGCTGACCCTGATGGATCTGCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGC
 102▶ C M G 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
StuI (2453)

2400 TCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGCACCTGCCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTC
 69▶ V A 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
XmnI (2595)

2500 GATGGCCGCCCGACATGGTGTGCTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAG
 36▶ I A 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

BbsI (2599) **AseI (2661)**
 2600 GTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTT
 2 T K M

SacI (2718)
 2700 ATCTGACGGTTCACATAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTG

SpeI (2816)
 2800 GAAAGTCCCCTTGATTTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGTGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATT

SnaBI (2944)
 2900 GATGTAAGTCCAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAGGTCATGTACTGGGCATAA

NdeI (3049)
 3000 TGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACT
 3100 CCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGCGGTCAGCCAGG

SdaI (3227) **PacI (3235)** **BspLU11I (3245)**
 3200 CGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGC
 3300 TGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAATAATCAGCGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGC
 3400 GTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTCT

ApaLI (3559)
 3500 CATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTAGCCCCGACCCTGCGCCTTAT
 3600 CCGGTAACATATCGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGG
 3700 TGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGA
 3800 GTTGGTAGCTCTTGATCCGGCAAACAACCCCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAG

EagI (3995)
NotI (3994)

PacI (3975) **SwaI (3984)**
 3900 ATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGC
 4000 CGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACA
 4100 AACTAGCAAATAGGCTGTCCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA