



PvuI (7)
SgfI (6) MfeI (82) EcoNI (96)
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245) **Bsu36I (291)**
Psp1406I (203) PvuII (239) EcoNI (287)
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)
AgeI (552)
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCCCTACCTGAGATCACCGGTCACCATGGGAATCCCAATGGGAAGTCGATGCTGGTGCCTTCT
13 M G I P M G K S M L V L L
601 CACCTTCTTGGCCTTCGCCTCGTGCATTGCTGTTACCGCCCAAGTGAAGCCTGTGCGGCGGGGAGCTGGTGGACACCCCTCCAGTTCGTCTGTGGG
13 T F L A F A S C C I A A Y R P S E T L C G G E L V D T L Q F V C G
SacII (702) PvuII (780)
701 GACCGGGCTTCTACTTACAGCAGGCCCCGAAGCCGTGTGAGCCGTGCGAGCCGTGGCATCGTTGAGGAGTGTGTTCCGCGAGCTGTGACCTGGCCCTCC
47 D R G F Y F S R P A S R V S R R S R G I V E E C C F R S C D L A L

SalI (843) **BspEI (864)** XcmI (878)
801 TGGAGACGTAAGTGTCTACCCCGCCAAGTCCGAGAGGGACGTGTCGACCCCTCCGACCGTGTTCGGACAACCTCCCGAGATACCCCGTGGCAAGTT
80 L E T Y C A T P A K S E R D V S T P P T V L P D N F P R Y P V G K F
EcoO109I (944)
FspI (938) **BbrPI (979)** **XhoI (997)**
901 CTTCAATATGACACCTGGAAGCAGTCCACCCAGCGCCTGCGCAGGGGCTGCCTGCCCTCCTGCGTGCCCGCGGGGTACAGTGTCTGCCAAGGAGCTC
113 F Q Y D T W K Q S T Q R L R R G L P A L L R A R R G H V L A K E L
MscI (1085)
1001 GAGGCGTTCAGGGAGGCCAAACGTACCCTGCCCTGATTGCTCTACCCACCAAGACCCCGCCACGGGGGCGCCCCCAGAGATGGCCAGCAATCGGA
147 E A F R E A K R H R P L I A L P T Q D P A H G G A P P E M A S N R

NheI (1127)
PstI (1122) MscI (1133)
1101 AGTGAGCAAAACTGCCGCAAGTCTGCAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTGGACAAACCACAACCTAGAAATGCAGTGAAAAAAT
180 K •

HpaI (1265) MfeI (1276)
1201 GCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAAGTTAAACAACAATTGCATTCTTTTATGTTTCA

EcoRI (1361)
1301 GGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACCTTAACTCCAA
1401 ATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTT

SapI (1543)
1501 CATGGAGTTAAGATATAGTGTATTTTCCCAAGTTTGAAGTACTGCTCTTCATTCTTTATGTTTTAAATGCACTGACCTCCCACATTCCTTTTATAGTAA

SspI (1600) SwaI (1614) EcoO109I (1675)
1601 AATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTT
1701 TAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTTCTGGTGTACTTGAGGGGATGAG
141 • N R T Y K L P I L
1801 TTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAAGGAGCATAGTCAAGATGAGCTCTGCACATGCCACAGGGG
131 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 C P

BstXI (1904)
1901 CTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCAGCAGACCCAA
97 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 S G I

StuI (2039)
2001 TGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGAC
64 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 A G V

BbsI (2185)
XmnI (2181)
2101 ATGGTCTTGTGCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCC
31 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 (2247)
2201 CTCCTATAGTGAAGTCTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACT
2301 AAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAGTCCCGTTGAT

2401 **SpeI (2402)**
TTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAA

2501 **SnaBI (2530)**
CCGCATCATCATGGTAATAGCGTAGCTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCAT

2601 **NdeI (2635)**
TTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTC

2701 AATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGT

2801 **PstI (2814)** **PacI (2821)**
AAGTTATGTAACGCTGCAGGTTAATTAAAGAACATGTGAGCAAAGGCCAGAAAAGGCCAGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATA

2901 **SdaI (2813)** **BspLU11I (2831)**
GGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAG

3001 CTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGT

3101 **ApaLI (3145)**
AGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCGACCCTGCGCCTTATCCGGTAACTATCGTC

3201 TTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTT

3301 GAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGA

3401 TCCGGCAAACAACACCCTGTTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTT

3501 **EagI (3581)**
CTACGGGTCTGACGCTCAGTGGAAACGAAAACCTACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGCCGCAATAAAATATCT

3601 **PacI (3561)** **SwaI (3570)** **NotI (3580)**
TTATTTTCATTACATCTGTGTGTTGTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGG

3701 CTGTCCCCAGTGCAAGTGCAAGTGCCAGAACATTTCTCTATCGAA