



PvuI (7)
SgfI (6)
MfeI (82) **EcoNI (96)**

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
HindIII (245) **Bsu36I (291)**

201 GTGAACGTTCTTTTTTCGCAACGGGTTTTCGCCCAAGACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTCACGCGCCCGCCGCTACCTGAGGCC

301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCCCTCCGCCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441) **NaeI (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

BstEII (555) **AgeI (552)** **Bsp120I**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACCGGTACCATGTATAACATGATGGAGACGGAGCTGAAGCCGCGGG

▶
▶ M Y N M M E T E L K P P G

HindIII (608)
Tth111I (682) **RsrII (680)**

601 CCCGAGCAAGCTTCGGGGGCGCGCGGAGGAGGCAACGCCACGGCGCGCGACCGGCGGCAACCAGAAGAACAGCCCGACCGCGTCAAGAGGCC

13▶ P Q Q A S G G G G G G N A T A A A T G G N Q K N S P D R V K R P

XmnI (702) **XmaI (722)**

701 ATGAACGCCTTCATGGTATGGTCCCGGGGCGAGCGGCGTAAGATGGCCAGGAGAACCCTAAGATGCACAACCTCGGAGATCAGCAAGCGCTGGGCGCGG

47▶ M N A F M V W S R G Q R R K M A Q E N P K M H N S E I S K R L G A

BssHII (858)

801 AGTGGAAACTTTTGTCCGAGACCAGAAAGCGCGCTTCATCGACGAGGCAAGCGGCTGCGCGTCTGCACATGAAGGAGCACCCGGATTATAAATACCG

80▶ E W K L L S E T E K R P F I D E A K R L R A L H M K E H P D Y K Y R

SacII (901) **BspHI (923)**
BsrBI (987)

901 GCCGCGCGGAAACCAAGACGCTCATGAAGAAGGATAAGTACACGCTTCCCGAGGCTTGTGGCCCCGGCGGGAACAGCATGGCGAGCGGGGTTGGG

113▶ P R R K T K T L M K K D K Y T L P G G L L A P G G N S M A S G V G

NgoMI (1006) **NaeI (1006)**
PvuII (1096)

1001 GTGGGCGCGGCTGGGTGCGGGCGTGAACCAGCGCATGGACAGCTACGCGCACATGAACGGCTGGAGCAACGGCAGCTACAGCATGATGCAGGAGCAGC

147▶ V G A G L G A G V N Q R M D S Y A H M N G W S N G S Y S M M Q E Q

XmaI (1116)
PstI (1180)

1101 TGGGTACCCGACGACCCCGGCTCAACGCTCAGGGCGGGCACAGATGCAACCGATGACCGCTACGACGTGACGCGCCTGCAGTACAACCTCATGAC

180▶ L G Y P Q H P G L N A H G A A Q M Q P M H R Y D V S A L Q Y N S M T

NeoI (1283) **XcmI (1283)**

1201 CAGCTCGCAGACCTACATGAACGGCTCGCCACCTACAGCATGTCTACTCGCAGCAGGGCACCCCGGTATGGCGTGGGCTCCATGGGCTCTGTGGTC

213▶ S S Q T Y M N G S P T Y S M S Y S Q Q G T P G M A L G S M G S V V

XemI (1316) **BstEII (1329)**
EcoO109I (1370)

1301 AAGTCCGAGGCCAGCTCCAGCCCCCGTGGTTACCTTCTCCCACTCCAGGGCGCCTGCCAGGCGGGGACCTCCGGACATGATCAGCATGTACC

247▶ K S E A S S S P P V V T S S S H S R A P C Q A G D L R D M I S M Y

BsrBI (1464)

1401 TCCCCGGCGCCGAGGTGCCGGAGCCCGCTGCGCCAGTAGACTGCACATGGCCAGCACTACCAGAGCGGCCCGGTGCCCGCACGGCCATTAACGGCAC

280▶ L P G A E V P E P A A P S R L H M A Q H Y Q S G P V P G T A I N G T

BamHI (1579)

BspEI (1522)
Tth111I (1547) **SacII (1575)**

1501 ACTGCCCTGTGCGACATGGAGTCCGGAGGGGTTGGCTCTCCTGGCAGACGTGCTCGCCGAGACGCAGGCGCCCGCGGATCCTATCCCTATGATGTG

313▶ L P L S H M E S G G G G S P G R R R R R R R R R R R G S Y P Y D V

MscI (1682)

NdeI (1619)
NheI (1676)

1601 CCAGACTATGCTGGCTATCCATATGATGTTCTGATTATGCTGGATACCCCTTATGATGTGCCAGACTATGCCTAAAGCTAGTGGCCAGACATGATAAGA

347▶ P D Y A G Y P Y D V P D Y A G Y P Y D V P D Y A •

1701 TACATTGATGAGTTTGGCAAACCAACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTTATTGTAACCATTATAA

HpaI (1814) **MfeI (1825)**

1801 GCTGCAATAAACAAGTTAAACAACAATTGCATTCTTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAA

EcoRI (1910)

1901 ATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTGAACTCTTTCTGAGGGATGAATAAGGCATAGGCAT

2001 CAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGGTTTGAAGTACGCTCTTCA

SspI (2149) **Swal (2163)**

2101 TTTCTTTATGTTTAAATGCACTGACCTCCACATTCCCTTTTGTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTT

EcoO109I (2224)

2201 TATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCA

2301 AGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGGGGGATGAGTTCCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAA

▶
▶ N R T Y K L P I L E E I T T K V L K G N M E I L V F

2401 **SacI (2424)** **BstXI (2453)** GCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACA
114 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 P H R V
StuI (2588)
Eco147I (2588)

2501 GCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGT
80 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 A E I H
2601 GGACAGCAGAGATGATCTCCCAGTCTGGTCTGATGGCCGCCCGACATGGTGCTTGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTC
47 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 T A V E
BspHI (2738) **VspI (2796)**
XmnI (2730) **AseI (2796)**

2701 CACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTA
14 V L E L D Q Q S I N F T K M
SacI (2853)

2801 ATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATT
SpeI (2951)

2901 TCGTCAATGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATTGACGTCAATGGGTTGGAGACTTGGAA
SnaBI (3079)
Eco105I (3079)

3000 AATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAG
NdeI (3184)

3100 TAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTG
3200 ATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTATTATTGAC
PstI (3363)
SdaI (3362) **PacI (3370)** **BspLU11I (3380)**

3300 GTCAATGGGCGGGGTCGTTGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGC
3398 CAGCAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGA
3498 GGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCT
ApaLI (3694)

3598 GTCCGCCTTTCTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTG
3698 CACGAACCCCGTTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCA
3798 CTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTAT
3898 CTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTGTTTGAAG
3998 CAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTT
PacI (4110) **SwaI (4119)** **NotI (4129)**

4098 TGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTA
4198 ACATACGCTCTCCATCAAACAAACGAAACAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAGTGACGGTGCCAGAACATTTCTCTATCGAA