



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

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
Bsu36I (291)

HindIII (245)
EcoNI (287)

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCGCTACCTGAGGGCC
 301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC
 401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGTCTTTGTTTCGTTT

BspHI (568) **SphI (586)**

AgeI (552) **XcmI (565)** **Bsp120I (579)**

501 TCTGTTTCTGCGCGTTACAGATCCAAGCTGTGACCGGCGCCTACCTGAGATCACCGGTAGGAGGGCCATCATGATTCTGGGCCCTGCATGCTGCTGCTG
1▶ M I L G P C M L L L

Bsu36I (614)

601 CTGCTGCTGCTGGGCTGAGGCTACAGCTCTCCCTGGGCATCATCCCAGTTGAGGAGGAGAACCCTGACTTCTGGAACCGCGAGGCGAGCCGAGGCCCTGG
 11▶ L L L L G L R L Q L S L G I I P V E E E N P D F W N R E A A E A L

PstI (714)
PvuII (787) **BamHI (796)**

701 GTGCCCAAGAAGCTGCAGCCTGCACAGACAGCCGCAAGAACCTCATCATCTTCTGGCGATGGGATGGGGGTGTCTACGGTGACAGCTGCCAGGAT
 44▶ G A A K K L Q P A Q T A A K N L I I F L G D G M G V S T V T A A R I

NdeI (862)

801 CCTAAAAGGGCAGAAGAAGGACAACTGGGCTGAGATACCCCTGGCTATGGACCGCTTCCATATGTGGCTGTCCAAGACATACAATGTAGACAAA
 77▶ L K G Q K K D K L G P E I P L A M D R F P Y V A L S K T Y N V D K

BstXI (959)

901 CATGTGCCAGACAGTGGAGCCACAGCCACGGCTACCTGTGCGGGTCAAGGGCAACTTCCAGACCATTGGCTTGAGTGCAGCCGCCGCTTTAACAGT
 111▶ H V P D S G A T A T A Y L C G V K G N F Q T I G L S A A A R F N Q

BstEII (1073)

1001 GCAACACGACACGCGCAACGAGGTCTCTCCGTGATGAATCGGGCAAGAAAGCAGGAAAGTCACTGGGAGTGGTAACCACCACACGAGTGCAGCACGC
 144▶ C N T T R G N E V I S V M N R A K K A G K S V G V V T T T R V Q H A

DraIII (1122)

1101 CTCGCCAGCCGGCACCTACGCCACACGGTGAACCGCAACTGGTACTCGGACGCCGACGTGCCTCGCTCGGCCGCCAGGAGGGTGGCAGGACATCGCT
 177▶ S P A G T Y A H T V N R N W Y S D A D V P A S A R Q E G C Q D I A

1201 ACGCAGCTCATCTCCAACATGGACATTGATGTGATCCTGGGTGGAGGCCGAAAGTACATGTTTCGCATGGGAACCCAGACCCTGAGTACCCAGATGACT
 211▶ T Q L I S N M D I D V I L G G G R K Y M F R M G T P D P E Y P D D

1301 ACAGCCAAGTGGGACAGGCTGGACGGGAAGAATCTGGTGCAGGAATGGCTGGCGAAGCGCCAGGGTGGCCGGTATGTGTGAAACCCGACTGAGCTCAT
 244▶ Y S Q G G T R L D G K N L V Q E W L A K R Q G A R Y V W N R T E L M

1401 GCAGGCTTCCCTGGACCCGTCTGTGACCCATCTCATGGGTCTCTTTGAGCCTGGAGACATGAAATACGAGATCCACCGAGACTCCACACTGGACCCCTCC
 277▶ Q A S L D P S V T H L M G L F E P G D M K Y E I H R D S T L D P S

SacII (1547)
PshAI (1584)

1501 CTGATGGAGATGACAGAGGCTGCCCTGCGCCTGCTGAGCAGGAACCCCGCGGCTTCTTCTCTCGTGGAGGGTGGTGCATCGACCAGGTCATCACG
 311▶ L M E M T E A A L R L L S R N P R G F F L F V E G G R I D H G H H

1601 AAAGCAGGGCTTACCGGGCACTGACTGAGACGATCATGTTTCGACGACGCCATTGAGAGGGCGGCCAGCTCACCAGCGAGGAGACACGCTGAGCCTCGT
 344▶ E S R A Y R A L T E T I M F D D A I E R A G Q L T S E E D T L S L V

BbsI (1719)
XcmI (1756) **XmaI (1783)** **StuI (1795)**

1701 CACTGCCGACCACTCCCACGCTTCTCCTCGGAGGCTACCCCTGCGAGGGAGCTCCATCTTCGGGCTGGCCCTGGCAAGGCCCGGACAGGAAGGCC
 377▶ T A D H S H V F S F G G Y P L R G S S I F T G L A P G K A R D R K A

EagI (1854) **BsrBI (1877)**

1801 TACACGGTCTCTATACGAAACGGTCCAGGCTATGTGCTCAAGGACGGCGCCCGCGGATGTTACCGAGAGCGAGAGCGGGAGCCCGAGTATCGGC
 411▶ Y T V L L Y G N G P G Y V L K D G A R P D V T E S E S G S P E Y R

BssHII (1959)
DraIII (1986)

1901 AGCAGTCAGCAGTGGCCCTGGACGAAGAGACCCACGACGAGGACGCTGGCGGTGTTGCGCGCGGCCCGCAGGCGCACCTGGTTCACGGCTGCAGGA
 444▶ Q Q S A V P L D E E T H A G E D V A V F A R G P Q A H L V H G V Q E

XmaI (2099)

2001 GCAGACCTTCATAGCGCAGTGCATGGCCTTCGCCGCTGCTGGAGCCCTACACCGCTGCGACTGGCGCCCCCGCCGGCACCACCGACGCCGCGCAC
 477▶ Q T F I A H V M A F A A C L E P Y T A C D L A P P A G T T D A A H

MscI (2140)

NheI (2134)

2101 CCGGGCGGTCCTCCGTTCCAAGCTCTGATTGAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGA
 511▶ P G R S R S K R L D •

HpaI (2272) **MfeI (2283)**

2201 AAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACCAATTGCATTATTTTA

EcoRI (2368)

2301 TGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAA

2401 CCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCAC

SapI (2550)

2501 CTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCAAGTTTGAAGTACGCTCTTCATTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTT

SspI (2607) **SwaI (2621)**
2601 TTAGTAAATATT CAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCC
2701 CCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGG
141 • N R T Y K L P
2801 GGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCC
133 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 (2911)
2901 ACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCA
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 (3046)
3001 GACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCG
66 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 A
BbsI (3192)
XmnI (3188)
3101 CCCCGACATGGTCTTGTGCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCAT
33 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 (3254)
3201 GGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACG
3301 GTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAAGTCC
SpeI (3409)
3401 CGTTGATTTACTAGTCAAACAACCTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACT
SnaBI (3537)
3501 GCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGCTGCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGC
NdeI (3642)
3601 GGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCAT
3701 TGACGTCAATGAAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGCGGGCCAT
PacI (3828)
PstI (3821)
SdaI (3820)
3801 TTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTT
3901 TTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTCCC
4001 CTGGAAGCTCCCTCGTGCGTCTCTGTTCGACCCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTC
ApaLI (4152)
4101 ACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCGACCCTGCGCCTTATCCGGTAAC
4201 TATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAG
4301 AGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAG
4401 CTCTTGATCCGGCAAACAACACCGCTGGTAGCGGTGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTG
EagI (4588)
PacI (4568) **SwaI (4577)** **NotI (4587)**
4501 ATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAA
4601 AATATCTTTATTTTACATCTGTGTGTTGTTTTTGTGTAATCGTAACATAACGCTCTCCATCAAACAACAAACAAACAACAACTAGCA
4701 AAATAGGCTGCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTATCGAA