



PvuI (7)
SgfI (6) 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA MfeI (82) EcoNI (96)

101 GAGAAAGTGGCGGGGTAACGGAAAGTGATGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **EcoNI (287)**
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCCTACCTGAGGCC

301 GCCATCCACGCGGGTTGAGTCGCGTTTCTGCCGCCTCCCGCTGTGGTGCCTCCTGAAGTCGCTCCGCCGTCTAGGTAAGTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

NgoMIV (441)

BspLU11I (560)
AgeI (552)
501 TCTGTTTGTGCGCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCAACATGTGGGGCTGGAAGTGCCTCCTCTTCTGGGCTGTGCT
601 GGTACAGCCACTCTCTGCACTGCCAGGCCAGCCCAACCTTGCCGAAACAAGCTCAGCCCTGGGGAGTCCCTGTGGAAGTGGAGTCTCTCCTGTCCAC
13> V T A T L C T A R P A P T L P E Q A Q P W G V P V E V E S L L V H
1 M W G W K C L L F W A V L

NruI (732)
701 CCTGGCGACTGTACAGCTTTCGCTGTCCGGCTTCGCGATGATGTGCAGAGCATCAACTGGCTGCGGGATGGGGTGCAGCTGGTGGAGAGCAACCGTACCC
47> P G D L L Q L R C R L R D D V Q S I N W L R D G V Q L V E S N R T
801 GCATCACAGGGGAGGAGTGGAGGTGCGGGACTCCATCCCCGCTGACTCTGGCCTTACGCTTGCCTGACCAGCAGCCCTCTGGCAGCGATACCACCTA
80> R I T G E E V E V R D S I P A D S G L Y A C V T S S P S G S D T T Y
901 CTTCTCCGTCATGTCTCAGATGCACTCCATCCTCGAAGATGATGACGACGACGACTCCTCCTCGAGGAGAAAGAGACGGACAACACCAAACA
113> F S V N V S D A L P S S E D D D D D D S S S E E K E T D N T K P

SphI (1056)
BstAPI (1056)
1001 AACCGTAGGCTGTAGTCCCTACTGGACATCCCCAGAGAAAATGGAGAAGAACTGCATGCGGTGCCCGCTGCCAAGACGGTGAAGTCAAGTGCCCGT
147> N R R P V A P Y W T S P E K M E K K L H A V P A A K T V K F K C P
1101 CGAGTGGGACACCAACCCACTCTGCGCTGGTTGAAAATGGCAAAGAGTTAAAGCTGACCACCGAATTGGAGGCTACAAGTTTCGCTATGCCACCTG
180> S S G T P N P T L R W L K N G K E F K P D H R I G G Y K V R Y A T W
1201 GAGCATATAATGGATTCTGTGGTGCCTTCTGACAAGGCAACTACACCTGCATCGTGGAGAATGAGTATGGGAGCATCAACCACACCTACCAGCTTGAC
213> S I I M D S V V P S D K G N Y T C I V E N E Y G S I N H T Y Q L D

XcmI (1349) **BsrGI (1397)**
1301 GTCGTGGAACGATCTCCGCACCGACCC ATCCTTCAGCGAGGGCTGCCTGCCAACAAGACAGTGGCCCTGGGAGCAATGTGGAGTTCATGTGTAAGGTG
247> V V E R S P H R P I L Q A G L P A N K T V A L G S N V E F M C K V
1401 ACAGCGATCCGCAGCCTCACATTCAGTGGCTGAAGCACATCGAGGTGAACGGGAGTAAGATCGGGCCAGACAATTGCCGTATGTCCAGATCCTGAAGAC
280> Y S D P Q P H I Q W L K H I E V N G S K I G P D N L P Y V Q I L K T

Bst1107I (1575)
1501 TGCTGGAGTAAATACCACCGACAAGAAATGGAGGTGCTTCATCTACGGAATGTCTCCTTTGAGGATGCGGGGAGTATACGTGCTTGGCGGGTAACTCT
313> A G V N T T D K E M E V L H L R N V S F E D A G E Y T C L A G N S

BsrBI (1675) **BsaBI (1689)**
1601 ATCGGACTCTCCATCACTCTGCATGGTTGACCGTTCTGGAAGCCTGGAAGAGACAGCTGTGATGACCTCACCGCTACCTGGAGATCATTATCT
347> I G L S H H S A W L T V L E A L E E R P A V M T S P L Y L E I I I

BsrBI (1761)
1701 ACTGCACCGGGCCTTCTGATCTCCTGCATGTTGGGCTCTGTCATCATCTATAAGATGAAGAGCGGCACCAAGAAGAGCGACTTCCATAGCCAGATGGC
380> Y C T G A F L I S C M L G S V I I Y K M K S G T K K S D F H S Q M A

MscI (1811) **FspI (1829)**
1801 TGTGCACAAGCTGGCCAAGAGCATCCCTCTGCGCAGACAGGTAACAGTGTGAGTCCAGTGCATCCATGAAGTCTGGGGTTCTCCTGGTTCGGCCC
413> V H K L A K S I P L R R Q V T V S A D S S A S M N S G V L L V R P

SandI (1918) **BamHI (1962)**
1901 TCACGGCTCTCCTCCAGCGGGACCCCATGCTGGCTGGAGTCTCCGAATATGAGTCCCTGAGGATCCCGCTGGGAGCTGCCACGAGACAGACTGGTCT
447> S R L S S S G T P M L A G V S E Y E L P E D P R W E L P R D R L V
2001 TAGGCAAACCACTTGGCGAGGGCTGCTTCCGGCAGGTGGTGTGGCTGAGGCCATCGGGCTGGATAAGGACAAACCAACCGTGTGACCAAAGTGGCCGT
480> L G K P L G E G C F G Q V V L A E A I G L D K D K P N R V T K V A V
2101 GAAGATGTTGAAGTCCGACGCAACGGAGAAGGACCTGTCCGATCTGATCTCGGAGATGGAGATGATGAAAATGATTGGGAAGCACAAGAATATCATCAAC
513> K M L K S D A T E K D L S D L I S E M E M K M I G K H K N I I N
2201 CTTCTGGGAGCGTGCACACAGGATGGTCTCTTTATGTCATTGTGGAGTACGCTCCAAAGGCAATCTCCGGGAGTATCTACAGGCCCGGAGGCTCCTG
547> L L G A C T Q D G P L Y V I V E Y A S K G N L R E Y L Q A R R P P

Scal (2306) **BglII (2355)**
2301 GGCTGGAGTACTGTATAACCCAGCCACAACCCCGAGGAACAGTGTCTTCCAAAGATCTGGTATCCTGTGCCTATCAGGTGGCTCGGGCATGGAGTA
580> G L E Y C Y N P S H N P E E Q L S S K D L V S C A Y Q V A R G M E Y

Bst1107I (2417) **BstEII (2451)** **XhoI (2495)**
2401 TCTTGCTTAAGAAGTGTATACACCGAGACCTGGCTGTAGGAACGCTCCTGGTACCAGGATAACGTAATGAAGATCGCAGACTTTGGCTTAGCTCGA
613> L A S K K C I H R D L A A R N V L V T E D N V M K I A D F G L A R

NgoMIV (2540)
EagI (2538)
2501 GACATTCATCATATCGACTACTACAAGAAAACCAACCGCCGGCTGCCTGTGAAGTGGATGGCCCTGAGGCGTTGTTGACCGGATCTACACACCC
647> D I H H I D Y Y K K T T N G R L P V K W M A P E A L F D R I Y T H

BglII (2636)
2601 AGAGCGATGTGTGGTCTTTTGGAGTGTCTTGTGGGAGATCTTCACTCTGGTGGCTCCCATACCCCGGTGTGCCTGTGGAGGAACCTTTCAAGCTGCT
680> Q S D V W S F G V L L W E I F T L G G S P Y P G V P V E E L F K L L

2701 GAAGGAGGTCATCGAATGGACAAGCCAGTAAGTGTACCAATGAGCTGTACATGATGATGCGGGACTGCTGGCATGCAGTGCCTCTCAGAGACCTACG
713▶ K E G H R M D K P S N C T N E L Y M M M R D C W H A V P S Q R P T
2801 TTCAAGCAGTTGGTGAAGACCTGGACCGCATTGTGGCCTTGACCTCCAACAGGAGTATCTGGACCTGTCCATACCGTGGACAGTACTCACCCAGCT
747▶ F K Q L V E D L D R I V A L T S N Q E Y L D L S I P L D Q Y S P S
2901 TTCCCACACACGGAGCTCCACCTGCTCCTCAGGGGAGGACTGTCTTCTCTCATGAGCCGTACCTGAGGAGCCCTGTCTGCCTCGACACCCACCCA
780▶ F P D T R S S T C S S G E D S V F S H E P L P E E P C L P R H P T Q
3001 GCTTGCCAACAGTGGACTCAAACGGCGTGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACTAGAATGCAGTGAAAA
813▶ L A N S G L K R R •
3101 AAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAAACAACAATTGCATTCATTTATGT
3201 TTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCT
3301 CCAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGCTGTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTT
3401 CTTTCATGGAGTTAAGATATAGTGATTTTTCCAAGTTTGAAGTACTCTTCTTTATGTTTTAAATGCAGTGCCTCCACATTCCCTTTTTA
3501 GTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCC
3601 AGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGA
3701 TGAGTTCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACA
132▶ 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 C
3801 GGGGTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTCTGCCCCTGCTCACAGCAGAC
99▶ 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 S
3901 CCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGCCCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCC
65▶ 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 G
4001 CGACATGGTGCTTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGT
32▶ 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
4101 GGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTT
4201 CACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGT
4301 TGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCC
4401 AAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCACTGACTGGGCATAATGCCAGGCGGG
4501 CCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGTACTGCCAAGTGGCAGTTTACCCTAAATACTCCACCCATTGA
4601 CGTCAATGAAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACAGCCAGGCGGGCCATTTA
4701 CCGTAAGTTATGTAACGCCTGCAGGTTAATTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTC
4801 CATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTG
4901 GAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACG
5001 CTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCCAGCGCTGCGCCTTATCCGGTAACTAT
5101 CGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGT
5201 TCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACTTCGAAAAAGAGTTGGTAGCTC
5301 TTGATCCGGCAAACAAACCCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATC
5401 TTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTATGGCTAGTTAATTAACATTTAAATC AGCGGCCGAATAAAAT
5501 ATCTTTATTTTATTACATCTGTGTGTTGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAA
5601 TAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA