



EagI (1)
NotI (-1)
1 GCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACA
PvuI (172)
SgfI (171)
101 AAACAACTAGCAAATAGGCTGTCCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAAGGATCTGCGATCGCTCCGGTCCCGTCAGTGGGCA
MfeI (247)
201 GAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCCGCAATTGAACGGTGCCTAGAGAAGGTGGCGGGGTAACCTGGGAAAGTGATG
Psp1406I (368)
301 TCGTGTACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCCGTGAACGTTCTTTTTCGCAACGGGTTTCCGCCAG
HindIII (410)
401 AACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCCGCCCTACCTGAGGCCGCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTT
501 CCGCGCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTGCAGACCGGCCCTTTGTCCGGCGCTCCCTTGAGGCTACCTA
601 GACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGCTCAACTCTACGTCTTTGTTTCTGTTTCTGCTGCGCGTTACAGATCCAAGCTGTGACC
KasI (700) AgeI (717) SfiI (728) KasI (774)
701 GGGCGCTACTCTGAGATCACCGGTAGGAGGGCCACCATGGCCGGGGGGCCGGGGCCGGGGGAGCCCGAGCCCCGGCGCCAGCACTTCTTGTACGAGGT
1 M A G G P G P G E P A A P G A Q H F L Y E V
801 GCCGCCCTGGGTATGTGCCCTTCTACAAAGTGTGAGCCCTGGAGCCCGCCACTGGTGCAGTTCGCGCCCTGATCGTGCAGCAGCAGCCAG
22 P P W V M C R F Y K V M D A L E P A D W C Q F A A L I V R D Q T E
Eco47III (913)
901 CTGCGGCTGTGCGAGCGCTCCGGGACGCGCACGGCCAGCGTCTGTGGCCCTGGATCAACCGAACGCCCGTGTGGCCGACCTCGTGCACATCTCACGC
56 L R L C E R S G Q R T A S V L W P W I N R N A R V A D L V H I L T
1001 ACCTGCAGCTGCTCCGTGCGCGGACATCATCACAGCCTGGCACCTCCCGCCCCGTTCCGTCCCGAGGACCACTGCCCGAGGCCAGCAGCATCCC
89 H L Q L L R A R D I I T A W H P P A P L P S P G T T A P R P S S I P
1101 TGCACCCGCGGAGCCGAGGCTGGAGCCCGGAAAGTTGCCATCCCTCAGCCCTCCACTTCCCTCAGGCTTTCCAGGCTCCAGACCCATTCAGGG
122 A P A E A E A W S P R K L P S S A S T F L S P A F P G S Q T H S G
1201 CCTGAGCTCGGCTGTTTCAAGCCCTGCTTCCCTGTGGCCTCCACGCCATCTCCAGCCCTTCTTCTACCAAGCCAGGCCAGAGAGCTCAGTGTCCC
156 P E L G L V P S P A S L W P P P P S P A P S S T K P G P E S S V S
SdaI (1301)
1301 TCTGCAGGGAGCCCGCCCTCTCCGTTTTGCTGGCCCTCTGTGAGATTTCCCGGGGACCCACAACCTTCTCGGAGGAGCTCAAGATCGGGGAGGGTGG
189 L L Q G A R P S P F C W P L C E I S R G T H N F S E E L K I G E G G
1401 CTTTGGGTGCGTGTACCGGGCGGTGATGAGGAACACGGTGTATGCTGTGAAGAGGCTGAAGGAGAAGCTGACCTGGAGTGGACTGCAGTGAAGCAGAGC
222 F G C V Y R A V M R N T V Y A V K R L K E N A D L E W T A V K Q S
XmnI (1574)
1501 TTCCTGACCGAGGTGGAGCAGCTGTCCAGGTTTCGTACCCAAACATTGTGGACTTTGCTGGCTACTGTGCTCAGAACGGCTTCTACTGCTGGTGTACG
256 F L T E V E Q L S R F R H P N I V D F A G Y C A Q N G F Y C L V Y
1601 GCTTCTGCCAACGGCTCCCTGGAGGACCTCCACTGCCAGACCCAGGCTGCCACCTTCTCTCTGGCCTCAGCGACTGGACATCCTTCTGGGTAC
289 G F L P N G S L E D R L H C Q T Q A C P P L S W P Q R L D I L L G T
1701 AGCCCGGGAATTCAGTTTCTACATCAGGACAGCCAGCCCTCATCCATGAGACATCAAGAGTTCCAACGCTTCTGGATGAGAGCTGCACCCAAAG
322 A R A I Q F L H Q D S P S L I H G D I K S S N V L L D E R L T P K
1801 CTGGGAGACTTTGGCCTGGCCGGTTCAGCCGCTTTGCCGGTCCAGCCCGAGCAGCAGCATGGTGGCCCGGACACAGACAGTGGGGGACCCCTGG
356 L G D F G L A R F S R F A G S S P S Q S S M V A R T Q T V R G T L
1901 CCTACCTGCCGAGGATACATCAAGACGGGAAGGCTGGCTGTGGACACGGACACCTTACGCTTTGGGGTGGTAGTGTAGAGACCTTGGCTGGTGCAGG
389 A Y L P E E Y I K T G R L A V D T D T F S F G V V L E T L A G Q R
2001 GGCTGTGAAGACGCACGGTGCAGGACCAAGTATCTGAAAGACCTGGTGAAGAGGAGGCTGAGGAGGCTGGAGTGGCTTTGAGAAGCACCCAGAGCACA
422 A V K T H G A R T K Y L K D L V E E E A E E A G V A L R S T Q S T
BglII (2149)
2101 CTGCAAGCAGTCTGGCTGCAGATGCTGGCTGCTCCCATGCCATGCAGATCTACAAGAAGCACCTGGACCCAGGCCCGGGCCCTGCCACCTGAGC
456 L Q A G L A A D A W A A P I A M Q I Y K K H L D P R P G P C P P E
2201 TGGGCTGGGCTGGCCAGCTGGCCTGCTGCTGCTGCACCGCCGGGCCAAAAGGAGGCTCCTATGACCCAGGTGTACGAGAGGCTAGAGAAGCTGCA
489 L G L G L G Q L A C C C L H R R A K R R P P M T Q V Y E R L E K L Q
2301 GGCAGTGGTGGCGGGGGTCCCGGGCATTCCGAGGCGCCAGCTGCATCCCCCTTCCCGCAGGAGAACTCTACGTGTCCAGCACTGGCAGAGCCAC
522 A V V A G V P G H S E A A S C I P P S P Q E N S Y V S S T G R A H
2401 AGTGGGCTGCTCCATGGCAGCCCTGGCAGCGCCATCAGGACCCAGTGGCCAGGCAGCAGCAGCTGCAGAGAGGCCCAACCCAGCCCTGGAGAGTG
556 S G A A P W Q P L A A P S G A S A Q A A E Q L Q R G P N Q P V E S
AvrII (2507)
2501 ACGAGAGCCTAGGCGGCTCTGTGCTGCCCTGCGCTCCTGGCACTTGACTCCAAGCTGCCCTCTGGACCCAGCACCCCTCAGGGAGGCCGGCTGTCTCA
589 D E S L G G L S A A L R S W H L T P S C P L D P A P L R E A G C P Q
BstXI (2650)
BamHI (2640)
2601 GGGGACACGGCAGGAGAATCGAGCTGGGGAGTGGCCAGGATCCCGGCCACAGCCGTGGAAGGACTGGCCCTTGGCAGCTCTGCATCATCGTCGTC
622 G D T A G E S S W G S G P G S R P T A V E G L A L G S S A S S S S
BsaBI (2711)
2701 GAGCCACCGCAGATTATCATCAACCTGCCGACAGAAGATGGTCCAGAAGCTGGCCCTGTACGAGGATGGGGCCCTGGACAGCCTGCAGCTGCTGCTG
656 E P P Q I I I N P A R Q K M V Q K L A L Y E D G A L D S L Q L L S
2801 CCAGTCCCTCCAGGCTTGGCCCTGGAACAGGACAGGCGGGGCCGAAGAAAGTGTGATGAATTTAGAGCAGATCTACCCCTATGATGTCCAGACTA
689 S S S L P G L G L E Q D R Q G P E E S D E F Q S R S Y P Y D V P D Y
MseI (2914)
NheI (2908)
2901 CGCTAAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTG
722 A •
HpaI (3046) MfeI (3057)
3001 TGATGCTATTGCTTTATTTGTAACATTATAAGCTGCAATAAACAAGTTAACAAACAATGCATTCAATTTATGTTTCAGGTTCCAGGGGAGGTGTGG

3101 **EcoRI (3142)**
GAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAAT

3201 CCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAGATATAG

3301 **SspI (3381)** **SwaI (3395)**
TGTATTTTCCAAGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCCACATTCCCTTTTTAGTAAATATTCAGAAATAATTTA

3401 AATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGA

3501 **DraIII (3574)** **EagI (3594)**
ACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTATCCTCAGTCCTGCTCCTCTGCCACAAAGTGCACGCAGTTGCCGGCCG

3601 **SgrAI (3810)**
GGTCGCGCAGGGCGAACTCCCGCCCCACGGCTGCTCGCGATCTCGGTCATGGCCGGCCGGAGGCGTCCCGGAAGTTCGTGGACACGACCTCCGACCA

3701 **BsrBI (3873)** **BssHII (3889)**
CTCGGCGTACAGCTCGTCCAGGCCGCGCACCCACACCCAGGCCAGGGTGTGTCGGCACCACCTGGTCTGGACCCGCTGATGAACAGGGTCCAGTCCG

3801 **SfiI (3925)** **MseI (3924)** **AseI (3985)**
TCCCGGACCACCCGGCGAAGTCTCTCCACGAAGTCCCGGAGAACCCGAGCCGGTCCGTCAGAACTCGACCGTCCGGCGACGTCGCGCCGGTGA

3901 **SpeI (4140)**
GCACCGAACGGCACTGGTCAACTTGGCCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAAC

4001 **SnaBI (4268)**
AGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCTACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCCATTTGCGTCAATTGG

4101 **NdeI (4373)**
GGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAG

4201 **SdaI (4551)** **PacI (4559)** **BspLU11I (4569)**
TCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCC

4301 **SgrAI (3810)**
ATAAGGTCATGTACTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAA

4401 **SgrAI (3810)**
GTGGGCGAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGG

4501 **SdaI (4551)** **PacI (4559)** **BspLU11I (4569)**
GGGTCGTTGGGCGTCCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAG

4601 **SgrAI (3810)**
GAACCGTAAAAAGCCGCTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCG

4701 **SgrAI (3810)**
ACAGGACTATAAAGATACCAGGCGTTTCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCTGCCGCTTACCGGATACCTGTCCGCTTTTCTCC

4801 **SgrAI (3810)**
CTTCGGGAAGCGTGGCGCTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCTGGGCTGTGTGCACGAACCCCGT

4901 **SgrAI (3810)**
TCAGCCCAGCGTGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGTAAGACAGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATT

5001 **SgrAI (3810)**
AGCAGAGCGAGGTATGTAGGCGGTCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGA

5101 **SgrAI (3810)**
AGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAACAAACCACCGCTGGTAGCGGTGTTTTTTGTTTGAAGCAGCAGATTACCGC

5201 **SwaI (5308)** **PacI (5299)**
CAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGT

5301 **SwaI (5308)**
TAATTAACATTTAAATCA