



125

PvuI (7)
SgfI (6)
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGGTTGAGTCGCGTTTCTGCCGCCCTCCCGCCTGTGGTGCTCTGAAGTGCCTCCGCGCTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGCTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) **BspEI (558)** **AgeI (573)** **Neol (566)**
501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGGTCCGGACACCATGGAACCGGTAGAGACCTGGACCCCGGAAA
1 M E P V E T W T P G K
SdaI (633)
601 GGTGGCAACTTGGCTGAGAGGTCTTGACGACTCCCTGCAGGACTATCCCTTTGAGGACTGGCAGCTGCCTGGCAAGAACCTGCTCCAGCTCTGCCCCAA
11 V A T W L R G L D D S L Q D Y P F E D W Q L P G K N L L Q L C P Q
XhoI (703)
701 AGCCTCGAGGCTCTGGCTGTGCGGTCTCTGGGACACCAGGAGCTCATCTGGCGGGGTGAACAGCTCCAGGCCCTGAGCTCCAGGCTACAGACAGAGA
45 S L E A L A V R S L G H Q E L I L G G V E Q L Q A L S S R L Q T E
801 ACCTGCAAAGCCTGACAGAGGGACTTCTGGGGCAACCATGACTTCCAGAGCATAGTCCAAGGCTGCCTGGGGGACTGTGCCAAGACCCCTATTGATGT
78 N L Q S L T E G L L G A T H D F Q S I V Q G C L G D C A K T P I D V
Acc65I (959) **SphI (991)**
901 CCTCTGTGACGCTGTGGAGCTGTTGCATGAAGCTGACGCCCTCCTTCTGGCTCAGCAGGTACCTTCTCCCACTTAAATGATTTCTCAGCCACGTGG
111 L C A A V E L L H E A D A L L F W L S R Y L F S H L N D F S A C Q
BbrPI (1093) **BstXI (1092)**
1001 GAGATCCGAGACTTGTGGAGGAGCTGAGCCAGGTCTTGCATGAGGATGGTCCAGCGGCTGAGAAGGAGGGCACAGTCCCTGAGGATCTGCAGCCACGTGG
145 E I R D L L E E L S Q V L H E D G P A A E K E G T V L R I C S H V
XcmI (1133) **XhoI (1162)**
1101 CTGGGATCTGCCACAACATCCTGGTCTGCTGCCCAAGGAGCTGCTGGAACAGAAGGCCGTGCTCGAGCAGGTGCAGCTGGACAGTCCATTGGCCTAGA
178 A G I C H N I L V C C P K E L L E Q K A V L E Q V Q L D S P L G L E
DraIII (1225)
1201 AATTCACACCACCAGCAATTGCCAGCACTTTGTGTCCCAAGTGGACACCAGGTTCCCACTGACTCCCGACTGCAGATCCAGCCTGGAGACGAGGTTGTC
211 I H T T S N C Q H F V S Q V D T Q V P T D S R L Q I Q P G D E V V
1301 CAGATCAACGACAGGTGGTGGTGGGATGGCCCGTAAGAANCATGGTGAAGACTGCTGCGGGAGCCAGCCGACTCAGCTTAGTGTGAAGAAGATCC
245 Q I N E Q V V V G W P R K N M V R E L L R E P A G L S L V L K K I
1401 CGATACCGGAGACCCCCACAGACGCCCTCAGGTCTGGACTCCCGCACCAGAGGAGCCATCACTGTCTCTGGCCCCACTGTCTCCAGGGCCCC
278 P I P E T P P Q T P P Q V L D S P H Q R S P S L S L A P L S P R A P
1501 ATCTGAAGACGTCTTTCCTTTGACCTGTCTTCAAACCCAGTCCCGGACCCAGCCCTGCCTGGACAGACTCTGCCTCCCTTGGCCCTGAGCCCTGCC
311 S E D V F A F D L S S N P S P G P S P A W T D S A S L G P E P L P
PshAI (1669)
1601 ATCCCCCGGAACCCCCAGCCATACTCCAGCAGGGGTAGCAGGGACTCCAGGGCTCCCTGAATCCCCGACAAGAGTCTGTTGGTCGGAAGAAATCAA
345 I P P E P P A I L P A G V A G T P G L P E S P D K S P V G R K K S
StuI (1701) **SgrAI (1723)** **EagI (1753)**
1701 AAGCCTGGCAGACCCGGCTGAGCCGCCGGGTGTCATGCCGTGAGCTGGCCCGCCGACTGTGACGGCTGGCTCCTGTTGCGAAAGGCACCCGGCGG
378 K G L A T R L S R R R V S C R E L G R P D C D G W L L L R K A P G G
KasI (1817) **Acc65I (1859)**
1801 CTTTCATGGGCCCGCTGGCGCCGCGCTGTTTGTGCTCAAGGGACACACGCTCTACTGGTACCGCCAGCCAGCCAGGATGAGAAGGCTGAGGGCCTCATC
411 F M G P R W R R R W F V L K G H T L Y W Y R Q P Q D E K A E G L I
XcmI (1907) **BsrGI (1973)**
1901 AATGTCTCCAACATAGTCTGGAAGTGGACATGATCAGAAGAAGAAATGTGTTTCAGCTCACCCATGATGTGTACAAACCTTCATCTTCGCTGCTG
445 N V S N Y S L E S G H D Q K K K Y V F Q L T H D V Y K P F I F A A
BglIII (2010)
2001 ATACCCTGACAGATCTGAGCATGTGGGTGCGTCATCTCATTACCTGCATCTCCAAGTACCAGTCTCCAGCGCGGCCCAACCACCCGAGAGGAAGACTG
478 D T L T D L S M W V R H L I T C I S K Y Q S P G R A P P P R E E D C
SandI (2140) **Neol (2187)**
2101 CTACAGTGAAGCAGAGGACCCCGGACGATGAGGCTGGGTCCTCAGCCTCGCCAGCCCTGCTCAAGCTGGGAGTCCCTCCATGGAGACACA
511 Y S E T E A E D P D D E A G S H S A S P S P A Q A G S P L H G D T
2201 TCACCTGCAGCCACCCACACAGCGCAGCCACGACTCCTTTGGCTCTGACAGACAGCAGTGAAGAGGACTGGAAGGAATGGTACGGGGCTGA
545 S P A A T P T Q R S P R T S F G S L T D S S E E A L E G M V R G L
AvrII (2319)
2301 GGCAGGGTGGCGTGTCCCTCCTAGGCCAGCCACAGCCCTGACCCAGGAACAGTGGCGGAGCTCTTTCATGCGGGCAACCCGAGACCCTCAGCTCAATGA
578 R Q G G V S L L G Q P Q P L T Q E Q W R S S F M R R N R D P Q L N E
DraIII (2407)
2401 GCGAGTGCACCGTGTGCGGGCGCTACAGAGCACACTCAAGGCAAAGCTGCAGGAGCTGCAGGCTCTAGAAGAAGTGTGGGTGACCCTGAGCTGACAGGA
611 R V H R V R A L Q S T L K A K L Q E L Q V L E E V L G D P E L T G
2501 GAGAAGTTCCGCCAGTGAAGGAGCAGAACCCGGAGCTGACTCAGAGGGCCTGGGGGCTGGGAGTGGCACAGGCTGAAGGCACTCCACATCTTGA
645 E K F R Q W K E Q N R E L Y S E G L G A W G V A Q A E G S S H I L
2601 CCTCTGACTCCACAGAACAGTCCCCCACTCCCTGCCCTGTACCCTGAAGAGCACTCCATCTGTGCCCTGACCTCAGAGAGCAGCTCCGACCTCC
678 T S D S T E Q S P H S L P S D P E E H S H L C P L T S E S S L R P P

MscI (2729)
MscI (2713) NheI (2723)
2701 TGACCTCTGACCCTGGCCAGCACGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTT
711▶ D L •

HpaI (2861)
2801 TATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAAGTTAACACAACAATTGCATTCATTTTATGTTTCAGGTT

EcoRI (2957)
2901 CAGGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTCATAAATACAGCATAGCAAACCTTTAACCTCCAAATCA
3001 AGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTTCATG

SspI (3196)
3101 GAGTTTAAGATATAGTGATTTTCCCAAGGTTTGAAGTACGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCCACATTCCTTTTATGAAAAA

SwaI (3210)
3201 TTCAGAAAATATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGT
3301 AGTTGGACTTAGGGAACAAGAACCTTTAATAGAAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGGATGAGTTCC
141▶ • N R T Y K L P I L E
3401 TCAATGGTGGTTTTGACCAGCTTGCATTATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGA
129▶ 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 S V
BstXI (3500)
3501 CCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGC
96▶ 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 A
StuI (3635)
3601 AATGGCTTCAGCAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCCCGACATGG
63▶ 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 H
BspHI (3785)
XmnI (3777)
3701 TGCTTGTTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCC
29▶ 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 (3843)
3801 TATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGC TATCTGACGGTTCACTAAAC

SpeI (3998)
3901 GAGCTCTGCTTATATAGACCTCCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAAGTCCCGTTGATTTA C
4001 TAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGC

SnaBI (4126)
4101 ATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAAGTTCATGTACTGGGCATAATGCCAGGGGGCCATTTAC

NdeI (4231)
4201 CGTCATTGACGTAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCAAGTGGGCGAGTTTACCCTAAATACTCCACCCATTGACGTCAATG
4301 GAAAGTCCCTATTGGCGTACTATGGAAACATACGTCATTATTGACGTCATGGGCGGGGCTGTTGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGT

SdaI (4409) PacI (4417) BspLU11I (4427)
4401 TATGTAACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGG
4499 CTCGCCCCCTGACGAGCATCAAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATAACAGGCGTTTTCCCTGGAAGCT
4599 CCCTCGTGCCTCTCTGTTCCGACCTGCGCTTACCGGATACCTGTCGCTTTTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAG

ApaLI (4741)
4699 GTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTT
4799 GAGTCAAACCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGA
4899 AGTGGTGGCTAACTACGGCTACACTAGAAGAAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATC
4999 CGGCAACAAACCACCGCTGGTAGCGGTGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCT

EagI (5177)
PacI (5157) SwaI (5166) NotI (5176)
5099 ACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTT
5199 ATTTTCATTACATCTGTGTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCT
5299 GTCCCAAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA