



PvuI (7)
SgfI (6)
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGTCTGTACTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **PvuII (239)**
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGGTTGAGTCGCGTTTCTGCCGCCTCCCGCCTGTGGTGCCTCCTGAACCTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) **AgeI (552)** **BspHI (560)** **BsaBI (577)**
501 TCTGTTTGTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTTCATCATGAGTACAAATGGTATGATCATCAGTCAAGGATAG
1 M S T N G D D H Q V K D S
EcoRI (691)

601 TCTGGAGCAATTGAGATGTCACTTTACATGGGAGTTATCCATTGATGACGATGAAATGCCTGATTTAGAAAACAGAGTCTTGGATCAGATTGAATTCCTA
13 L E Q L R C H F T W E L S I D D D E M P D L E N R V L D Q I E F L
XcmI (704)
701 GACACCAATACAGTGTGGGAATACACAACCTACTAGCCTATGTGAAACCTGAAAGCCAGAAATGAGGAAGCCCTGAAGAGCTTAAAAGAAGCTGAAA
47 D T K Y S V G I H N L L A Y V K H L K G Q N E E A L K S L K E A E

BstEII (846)
801 ACTTAATGCGAAGAACATGACAACCAAGCAAATGTGAGGAGTCTGGTGACCTGGGGCAACTTTGCCTGGATGTATTACCACATGGGCAGACTGGCAGA
80 N L M Q E E H D N Q A N V R S L V T W G N F A W M Y Y H M G R L A E
901 AGCCAGACTTACCTGGACAAGGTGGAGAACATTTGCAAGAAGCTTTCAAATCCCTTCCGCTATAGAATGGAGTGTCCAGAAAATAGACTGTGAGGAAGGA
113 A Q T Y L D K V E N I C K K L S N P F R Y R M E C P E I D C E E G

Eco47III (1093) **AfeI (1093)**
1001 TGGCCTTGTGAAGTGTGGAGGAAAGAATTATGAACGGGCCAAGGCCTGCTTTGAAAAGGTGCTTGAAGTGGACCCTGAAAACCTGAATCCAGCGCTG
147 W A L L K C G G K N Y E R A K A C F E K V L E V D P E N P E S S A
1101 GGTATGCGATCTCTGCCTATCGCCTGGATGGCTTTAAATTAGCCACAAAAATCACAAGCCATTTTCTTTGCTTCCCCTAAGGCAGGCTGTCCGCTTAAA
180 G Y A I S A Y R L D G F K L A T K N H K P F S L L P L R Q A V R L N
BspLU11

1201 TCCAGACAATGGATATATTAAGTTCTCCTTGCCTGAAGCTTCAGGATGAAGGACAGGAAGCTGAAGGAGAAAAGTACATTGAAGAAGCTCTAGCCAAC
213 P D N G Y I K V L L A L K L Q D E G Q E A E G E K Y I E E A L A N

PshAI (1311)
1301 ATGTCCTCACAGACCTATGCTTTCGATATGCAGCCAAGTTTTACCGAAGAAAAGGCTCTGTGGATAAAGCTCTTGAAGTATTAATAAAAAGGCCTTGCAAG
247 M S S Q T Y V F R Y A A K F Y R R K G S V D K A L E L L K K A L Q

BsaBI (1458)
1401 AACACCCACTTCTGTCTTACTGCATCACCAGATAGGGCTTGTCTACAAGGCACAAATGATCCAAATCAAGGAGGCTACAAAAGGCAGCCTAGAGGGCA
280 E T P T S V L L H H Q I G L C Y K A Q M I Q I K E A T K G Q P R G Q

PstI (1553) **XcmI (1571)** **XbaI (1590)**
1501 GAACAGAGAAAAGCTAGACAAAAATGATAAGATCAGCCATATTTTCAATTTGAATCTGCAGTGGAAAAAAGCCACATTTGAGGTGGCTCATCTAGACCTG
313 N R E K L D K M I R S A I F H F E S A V E K K P T F E V A H L D L

NsiI (1662)
1601 GCAAGAATGTATATAGAAGCAGGCAATCACAGAAAAGCTGAAGAGAATTTCAAAAATGTTATGATGAAACCAAGTGGTAGAAGAAAACAATGCAAGACA
347 A R M Y I E A G N H R K A E E N F Q K L L C M K P V V E E T M Q D
1701 TACATTTCCACTATGGTCGGTTTCAGGAATTTCAAAGAAATCTGACGTCAATGCAATATCCATTATTTAAAAGCTATAAAAATAGAACAGGCATCATT
380 I H F H Y G R F Q E F Q K K S D V N A I I H Y L K A I K I E Q A S L

BglIII (1866)
1801 AACAAAGGATAAAAGTATCAATTTTGAAGAAATTTGTTTTAAGGAACTTCGGAGAAAAGCATTAGATCTGGAAAAGCTTGAGCCTCCTTGGTTTCGTC
413 T R D K S I N S L K K L V L R K L R R K A L D L E S L S L L G F V

BsrBI (1942) **ScaI (1934)** **Bsp120I (1946)** **Tth111I (1985)**
1901 TACAAATTGGAAGGAAATATGAATGAAGCCCTGGAGTACTATGAGCGGGCCCTGAGACTGGCTGCTGACTTTGAGAACTCTGTGAGACAAGGTCCTTAGG
447 Y K L E G N M N E A L E Y Y E R A L R L A A D F E N S V R Q G P •

MscI (2009) **NheI (2003)**
2001 CACGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAGTGAAGTGAAGGAAATGCTTTATTTGTGAAATTTGTGATG

HpaI (2141)
2101 CTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGT

EcoRI (2237)
2201 TTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTT
2301 TCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTATGAGGTTTAAGATATAGTGTAT

SspI (2476) **SwaI (2490)**
2401 TTTCCAAGGTTTGAAGTACTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAAATATTTAAATAC

2501 ATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAA

2601 GGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAG
 141 • N R T Y K L P I L E E I T T K V L

2701 CTTGCCATTCATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCC
 123 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 V R I S R D

2801 ACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCAGACAG
 89 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 I A E A C V T

2901 TGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCCGACATGGTGTCTGTTGCTCATAGAG
 56 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 H K N D E Y L

BbsI (3061)

3001 CATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATAC
 23 M T I K E T A V E V L E L D Q Q S I N F T K M

XmnI (3057)

3101 TATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAACGAGCTCTGCTTATATAGACC
 AseI (3123) SacI (3180)

3201 TCCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCAT
 SpeI (3278)

3301 TGACGTCAATGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGAT

SnaBI (3406)

3401 GACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAGGTCATGTACTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGG

NdeI (3511)

3501 GCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTTA

PacI (3697)

3601 CTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTA
 PstI (3690) SdaI (3689)

BspLU11I (3707)

3701 ATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGGTGGCTTTTCCATAGGCTCCGCCCCCTGACGAGCATC

3801 ACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGCGCTTCCCTGGAAGCTCCCTCGTGGCTCTCTCTGTTCC

3901 GACCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTACGCTGTAGGTATCTCAGTTCGGTGTAGGTC

ApaLI (4021)

4001 GTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACG

4101 ACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTA

4201 CACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGT

4301 AGCGGTGGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGGA

EagI (4457)

PacI (4437) SmaI (4446) NotI (4456)

4401 ACGAAAACCTACGTTAAGGGATTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTATTACATCTGTGTGTT

4501 GGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTG

4601 CCAGAACATTTCTCTATCGAA