



PvuI (7)
SgfI (6)
 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA
 101 GAGAAAGTGGCGCGGGTAAACTGGAAAAGTATGTCGTGACTGGCTCCGCCTTTTTCCCGAGGTTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) **PvuII (239)** **Bsu36I (291)**
 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCGCCCTACCTGAGGGCC
 301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCCTGTGGTGCTCCTGAAGTGCCTCCCGCTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

AgeI (552) **BspHI (560)**
 501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCTACCTGAGATCACCGGTATCATGAATCAGGTCACTATTCAATGGGATGCAGTAATAGC
 13 M N Q V T I Q W D A V I A

PvuII (615) **MscI (654)**
 601 CCTTTACATACTCTTCAGCTGGTGTATGGAGGAATTACAAATATAAACTGCTCTGCCACATCTGGGTAGAACCAGCCACAATTTTTAAGATGGGTATG
 13 L Y I L F S W C H G G I T N I N C S G H I W V E P A T I F K M G M
 701 AATATCTCTATATATTGCCAAGCAGCAATTAAGAACTGCCAACCAAGGAACTTCATTTTTATAAAAAATGGCATCAAAGAAAGATTTCAAATCACAAGGA
 47 N I S I Y C Q A A I K N C Q P R K L H F Y K N G I K E R F Q I T R
 801 TTAATAAAACAACAGCTCGCTTTGGTATAAAAACTTTCTGGAACACATGCTTCTATGTACTGCACTGCTGAATGTCCAAAACATTTTCAAGAGACT
 80 I N K T T A R L W Y K N F L E P H A S M Y C T A E C P K H F Q E T L

EcoRV (926)
 901 GATATGTGAAAAGACATTTCTTCTGGATATCCGCCAGATATTCCTGATGAAGTAACCTGTGTCAATTTATGAATATTCAGGCAACATGACTTGCACCTGG
 113 I C G K D I S S G Y P P D I P D E V T C V I Y E Y S G N M T C T W

BspLU11I (1041) **SapI (1066)**
 1001 AATGCTGGGAAGCTCACCTACATAGACACAAAATACGTGGTACATGTGAAGAGTTTAGAGACAGAAGAAGAGCAACAGTATCTCACCTCAAGCTATATTA
 147 N A G K L T Y I D T K Y V V H V K S L E T E E E Q Q Y L T S S Y I

ScaI (1133)
 1101 ACATCTCCACTGATTCATTACAAGGTGGCAAGAAGTACTTGGTTTGGGTCCAAGCAGCAAACGCCTAGGCATGGAAGAGTCAAACAACCTGCAAATTC
 180 N I S T D S L Q G G K K Y L V W V Q A A N A L G M E E S K Q L Q I H

PstI (1223)
 1201 CCTGGATGATATAGTGATACCTTCTGCAGCGCTCATTCCAGGGCTGAGACTATAAATGCTACAGTGCCCAAGACCATAATTTATTGGGATAGTCAAACA
 213 L D D I V I P S A A V I S R A E T I N A T V P K T I I Y W D S Q T

NdeI (1385)
 1301 ACAATTGAAAAGTTCCTGTGAAATGAGATACAAGGCTACAACAACCAAACTTGGAAATGTTAAAGAATTTGACACCAATTTTACATATGTGCAACAGT
 247 T I E K V S C E M R Y K A T T N Q T W N V K E F D T N F T Y V Q Q

SnaBI (1429)
 1401 CAGAATTCTACTTGGAGCCAAACATTAAGTACGTATTTCAAGTGAAGTGTCAAGAAACAGGCCAAAAGGTACTGGCAGCCTTGGAGTTCACCGTTTTTTTCA
 280 S E F Y L E P N I K Y V F Q V R C Q E T G K R Y W Q P W S S P F F H
 1501 TAAACACCTGAAACAGTTCGCCAGGTACATCAAAGCATTCCAACATGACACATGGAATTCGGGCTAACAGTTCCTTCCATCTCTACAGGCACCTT
 313 K T P E T V P Q V T S K A F Q H D T W N S G L T V A S I S T G H L
 1601 ACTTCTGACAACAGAGGAGACATTGGACTTTTATTGGGAATGATCGTCTTGTCTTGTATGTTGTCAATTTCTTTGATTGGGATATTTAACAGATCAT
 347 T S D N R G D I G L L L G M I V F A V M L S I L S L I G I F N R S
 1701 TCCGAAGTGGGATTAAGAAGGATCTTATTGTTAATACCAAAGTGGCTTTATGAAGATATTCCTAATATGAAAAACAGCAATGTTGTGAAAATGCTACA
 380 F R T G I K R R I L L L I P K W L Y E D I P N M K N S N V V K M L Q
 1801 GGAAAATAGTGAACCTTATGAATAAATCCAGTGAGCAGGTCCTATATGTTGATCCCATGATTACAGAGATAAAGAATCTTCATCCCAGAACACAAG
 413 E N S E L M N N N S S E Q V L Y V D P M I T E I K E I F I P E H K
 1901 CCTACAGACTACAAGAAGGAGAATACAGGACCCCTGGAGACAAGAGACTACCCGCAAAAACCTGCTATTTCGACAATACTACAGTTGTATATTTCTGATC
 447 P T D Y K K E N T G P L E T R D Y P Q N S L F D N T T V V Y I P D

Bsu36I (2038)
 2001 TCAACACTGGATATAAACCCCAAATTTCAAATTTCTGCCTGAGGGAAGCCATCTCAGCAATAATAATGAAATTACTTCTTAACTTAAACCACAGT
 480 L N T G Y K P Q I S N F L P E G S H L S N N N E I T S L T L K P P V
 2101 TGATTCCTTAGACTCAGGAAATAATCCCAGGTTACAAAAGCATCCTAATTTGCTTTTTCTGTTTCAAGTGTGAATTCCTAAGCAACACAATATTTCTT
 513 D S L D S G N N P R L Q K H P N F A F S V S S V N S L S N T I F L

BstXI (2276) **XcmI (2273)** **DraIII (2297)**
 2201 GGAGAATTAAGCCTCATATTAATCAAGGAGAAATGCAGTTCCTCTGACATACAAAACCTCAGTAGAGGAGGAAACCACCATGCTTTTGGAAAATGATTCAC
 547 G E L S L I L N Q G E C S S P D I Q N S V E E E T T M L L E N D S
 2301 CCAGTGAAACTATTCCAGAACAGACCCTGCTTCTGATGAATTTGCTCCTGTTTGGGGATCGTGAATGAGGAGTTCATCTATTAATACTATTTTCC
 580 P S E T I P E Q T L L P D E F V S C L G I V N E E L P S I N T Y F P

MscI (2471) **NheI (2465)**
 2401 AAAAAATATTTTGGAAAGCCACTTCAATAGGATTTCACTCTTGAAAAGTAGAGCTGTGTGGTCAGTAGCTGGCCAGACATGATAAGATACATTGATGA
 613 Q N I L E S H F N R I S L L E K

2501 GTTTGGACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAA

HpaI (2603)

2601 CAAGTTAAACAACAACAATTGCATTCATTTTATGTTTCAGGTTCAAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGG

2701 AATTCTAAAATACAGCATAGCAAAACTTAACTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTT

SapI (2881)

2801 GCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTCATGGAGTTAAGATATAGTGTATTTCCCAAGGTTTGAAGTACTGCTCTTCATTTCTTTATGT

Swal (2952)

2901 TTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGA

3001 ATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGC

3101 TTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCACTCAATGAGCACAAAGCAGTCAGGAG
 141 • N R T Y K L P I L E E I T T K V L K G N M E I L V F C D P A

SacI (3213) **BstXI (3242)**

3201 CATAGTCAGAGATGAGCTCTGCGACATGCCACAGGGGCTGACCACCTGATGGACTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGT
 110 Y D S I L E R C M G C P S V V R I S R D V E D S Y P H R V A V I T

StuI (3377)

3301 GTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAAATGGCAATGGCTTCCAGCACAGACAGTGACCCTGCCAATGTAGGCCCTCAATGTGGACAGCAGAG
 77 D F D K Q G N S V A S G I A I A E A C V T V R G I Y A E I H V A S

3401 ATGATCTCCCCAGTCTTGGTCTGATGGCCGCCGACATGGTGTCTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGTCCA
 43 I I E G T K T R I A A G V H H K N D E Y L M T I K E T A V E V L E L

BbsI (3523)

3501 GATCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAAC
 10 D Q Q S I N F T K M

SacI (3642)

3601 AGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTGCGTCAATGG

SpeI (3740)

3701 GGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAG

SnaBI (3868)

3801 TCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCC

NdeI (3973)

3901 ATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAA

4001 GTGGGCAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGG

PacI (4159)

PstI (4152) **SdaI (4151)** **BspLU11I (4169)**

4101 GGTCTGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAAGTTATGTAACCTCTGAGGTTAATAAGAACATGTGAGCAAAAGGCCAGAAAAGGCCAG

4201 GAACCGTAAAAAGGCCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCTGACGAGCATCAAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCG

4301 ACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCC

ApaLI (4483)

4401 CTTCGGGAAGCGTGGCGTCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCTCCAAGTGGGCTGTGTGCACGAACCCCCGT

4501 TCAGCCCAGCCGCTGCGCCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAAACAGGATT

4601 AGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGA

4701 AGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGGCAAGCAGCAGATTACGGC

PacI (4899)

4801 CAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGT

EagI (4919) **NotI (4918)**

Swal (4908)

4901 TAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTATTACATCTGTGTGGTTTTTTGTGTAATCGTAACTAACATACGCTCTCCA

5001 TCAAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA