

PvuI (7) SgfI (6) MfeI (82)
1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
201 Psp1406I (203) PvuII (239) HindIII (245) Bsu36I (291)
GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCAGAGGGCTCGCATCTCTCTTACCGCGCCCGCCGCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCCTGAACTGCGTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

AgeI (552) BspLU111 (568)
501 TCTGTTTGTCCGGCGTTACAGATCCAAGCTGTGACCGGCGCCTACCTGAGATCACCGTAGGAGGGCCAAACATGCTGCTGAAGTCATCCATCAGTTGAA
1 M S A E V I H Q V E

EcoO109I (682)
601 GAAGCACTTGATACAGATGAGAAGGAGATGCTGCTCTTTTTGTGCCGGGATGTTGCTATAGATGTGGTCCACCTAATGTCAGGGACCTTCTGGATATTT
11▶ E A L D T D E K E M L L F L C R D V A I D V V P P N V R D L L D I
701 TACGGGAAAAGAGGTAAGCTGTCTGTCGGGACTTGGCTGAACTGCTCTACAGAGTGAAGCGATTTGACCTGCTCAAACGTATCTTGAAGATGGACAGAAA
44▶ L R E R G K L S V G D L A E L L Y R V R R F D L L K R I L K M D R K
801 AGCTGTGGAGACCACCTGCTCAGGAACCTCACCTTGTTCGGACTATAGAGTGTGATGGCAGAGATTGGTGAAGATTGGATAAATCTGATGTGTCC
77▶ A V E T H L L R N P H L V S D Y R V L M A E I G E D L D K S D V S

AseI (902) BspHI (913) XmnI (953)
901 TCATTAATTTTCCATGAAGGATTACATGGGCGAGGCAAGATAAGCAAGGAGAAGAGTTTCTTGGACCTTGTGGTTGAGTTGGAGAAAATAAATCTGG
111▶ S L I F L M K D Y M G R G K I S K E K S F L D L V V E L E K L N L

BbsI (1061)
1001 TTGCCCCAGATCAACTGGATTTATTAGAAAAATGCCTAAAGAACATCCACAGAATAGACCTGAAGACAAAAATCCAGAAGTACAAGCAGTCTGTTCAAGG
144▶ V A P D Q L D L L E K C L K N I H R I D L K T K I Q K Y K Q S V Q G

BamHI (1154)
1101 AGCAGGGACAAGTTACAGGAATGTTCTCCAAGCAGCAATCCAAAAGAGTCTCAAGGATCCTTCAAATAACTTCAGGCTCCATAATGGGAGAAGTAAAGAA
177▶ A G T S Y R N V L Q A A I Q K S L K D P S N N F R L H N G R S K E

HindIII (1264)
1201 CAAAGACTTAAGGAACAGCTTGGCGCTCAACAAGAACCAGTGAAGAAATCCATTGAGAAATCAGAAGCTTTTTTGGCTCAGAGCATACTGAAGAGAGAT
211▶ Q R L K E Q L G A Q Q E P V K K S I Q E S E A F L P Q S I P E E R

SapI (1307) AvrII (1319) ClaI (1338)
1301 ACAAGATGAAGAGCAAGCCCCTAGGAATCTGCCTGATAATCGATTGCATTGGCAATGAGACAGAGCTTCTTCGAGACACCTTCACTTCCCTGGGCTATGA
244▶ Y K M K S K P L G I C L I I D C I G N E T E L L R D T F T S L G Y E

NsiI (1425) MscI (1448)
1401 AGTCCAGAAATCTTGCATCTCAGTATGCATGGTATATCCCAGATTCTTGGCCAAATTTGCCTGTATGCCGAGCACCGAGACTACGACAGCTTTGTGTGT
277▶ V Q K F L H L S M H G I S Q I L G Q F A C M P E H R D Y D S F V C

XcmI (1523)
1501 GTCCTGGTGAAGGAGGCTCCAGAGTGTGTATGGTGTGGATCAGACTCACTCAGGGCTCCCCCTGCATCACATCAGGAGGATGTTGATGGGAGATT
311▶ V L V S R G G S Q S V Y G V D Q T H S G L P L H H I R R M F M G D

PvuII (1665)
1601 CATGCCCTTATCTAGCAGGGAAGCCAAAGATGTTTTTATTGAGAACTATGTTGTGTCAGAGGGCCAGCTGGAGGACAGCAGCCTTGGAGGTGGATGG
344▶ S C P Y L A G K P K M F F I Q N Y V V S E G Q L E D S S L L E V D G

EcoRI (1719) ApaLI (1745) BspLU111 (1795)
1701 GCCAGCGATGAAGAATGTGGAATCAAGGCTCAGAAGCGAGGGCTGTGCACAGTTACCAGAGAAGCTGACTTCTTCTGGAGCCTGTGACTGCGGACATG
377▶ P A M K N V E F K A Q K R G L C T V H R E A D F F W S L C T A D M
1801 TCCCTGCTGGAGCAGTCTCAGCTCACAGTCCAGTCCCTGTACCTGCAGTGCCTCTCCAGAACTGAGACAAGAAAACGCCACTCCTGGATCTTACACA
411▶ S L L E Q S H S S P S L Y L Q C L S Q K L R Q E R K R P L L D L H

BspLU111 (1915) SspI (1954)
1901 TTGAACCTCAATGGCTACATGATGATTGGAACAGCAGAGTTTCTGCCAAGGAGAAATATTATGCTGGCTGCAGCACACTCTGAGAAAAGAACTTATCCT
444▶ I E L N G Y M Y D W N S R V S A K E K Y Y V W L Q H T L R K K L I L
2001 CTCCTACACATAAGAAACAAAAGGCTGGGCGTAGTGGCTCACACCTGTAATCCAGCACTTTGGGAGGCCAAGGAGGCAGATCACTCAGGTCAGGAG
477▶ S Y T •

MscI (2108) NheI (2102)
2101 TTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGC

HpaI (2240) MfeI (2251)
2201 TATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAGTTAAACAACAACATTGCATTCATTTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGGTT

EcoRI (2336)
2301 TTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACCTTAACTCCAAATCAAGCCTCACTTGAATCCTTTT

2401 CTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTCATGGAGTTAAGATATAGTGATT

SapI (2518) SspI (2575) SwaI (2589)
2501 TTCCAAGGTTTGAAGTACTCTTCATTTCTTTATGTTTTAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTGAGAAAATTTAAATACA

EcoO109I (2650)

2601 TCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAG

2701 GAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGC
141 • N R T Y K L P I L E E I T T K V L

SacI (2850)

2801 TTGCCATTCACTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCA

122 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 V

2901 CCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGT
89 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

StuI (3014)

3001 GACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTCTGATGGCCGCCCGACATGGTCTTGTTCCTCATAGAGC

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 (3160)

XmnI (3156)

3101 ATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACT

22 M T I K E T A V E V L E L D Q Q S I N F T K M

AseI (3222)

SacI (3279)

3201 ATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACATAACGAGCTCTGCTTATATAGACCT

SpeI (3377)

3301 CCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCCTGTTGATTTACTAGTCAAAAACAACTCCCATT

3401 GACGTCATATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATG

SnaBI (3505)

3501 ACTAATACGTAGATGTACTGCCAAGTAGAAAGTCCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGG

NdeI (3610)

3601 GCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTAC

PaeI (3796)

SdaI (3788)

3701 TATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAA

BspLU111 (3806)

3801 ITAAGAACATGTGAGCAAAAGGCCAGAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCA

3901 CAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCG

4001 ACCCTGCCGCTTACCGGATACCTGTCCGCCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGATAGTATCTCAGTTCGGTGTAGGTCG

ApaLI (4120)

4101 TTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTACGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGA

4201 CTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTAC

4301 ACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACCCAGCTGGTA

4401 GCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAA

EagI (4556)

PaeI (4536) SwaI (4545)

NotI (4555)

4501 CGAAAACCTCACGTTAAGGGATTTTGGTCAATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAAATATCTTTATTTTATTACATCTGTGTGTTG

4601 GTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCGAGTGAAGTGCAGGTGC

4701 CAGAACATTTCTCTATCGAA