



PvuI (7)
SgfI (6)
1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTACCGCGCCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGGTTCGCGCCTCCCGCCTGTGGTGCCTCCTGAAGTGCCTCCCGCTTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)
AgeI (552) **NcoI (560)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATTGGCTCCAGAGATCAACTTGCCGGGCCAATGAGCCT

601 CATTGATAAACTAAAGGGCAGCTGGTGGTGAATCCAGAAGCTCTGAAGATCCTATCTGCAATTACGCAGCCTGTGGTGGTGGGATTGTGGCCTC
13▶ I D N T K G Q L V V N P E A L K I L S A I T Q P V V V V A I V G L
701 TATCGCACAGGCAAACTCTACCTGATGAACAAGCTGGCTGGGAAGAAAACGGCTTCTCTAGGCTCCACAGTGAAGTCTCACACCAAGGGAACTGGA
47▶ Y R T G K S Y L M N K L A G K K N G F S L G S T V K S H T K G I W
801 TGTGGTGTGTCCTCAACCAAGAAGCCAGAACACACCTAGTTCTGCTCGACACTGAGGGCTGGGAGATATAGAGAAGGGTGAATGAGAATGACTC
80▶ M W C V P H P K K P E H T L V L L D T E G L G D I E K G D N E N D S

MscI (914) **BsrGI (941)** **NcoI (974)** **DraIII (988)**
901 CTGGATCTTTGCCTTGCCATCCTCCTGAGCAGCACCTTCGTGTAACAATAGCATGGGAACCATCAACCAGCAGGCCATGGACCAACTCCTATGTGACA
113▶ W I F A L A I L L S S T F V Y N S M G T I N Q Q A M D Q L H Y V T

XcmI (1081)
1001 GAGCTGACAGATCGAATCAAGGCAAACTCCTCACCTGGTAACAATTCTGTAGACGACTCAGCTGACTTTGTGAGCTTTTTCCAGCATTTGTGTGGACTC
147▶ E L T D R I K A N S S P G N N S V D D S A D F V S F F P A F V W T
1101 TCAGAGATTTACCCTGGAAGTGAAGTAGAGGAGAACCCATCACTGCTGATGACTACTTGGAGCTTTCGTAAGKTAAGAAAAGGTACTGATAAGAA
180▶ L R D F T L E L E V D G E P I T A D D Y L E L S L K L R K G T D K K

HindIII (1206) **BsrBI (1277)**
1201 AAGTAAAAGCTTTAATGATCCTCGTTGTGCATCCGAAAGTCTTCCCAAGAGGAAGTGCTTCGCTTCGATTGGCCCGCTCCTAAGAAGTACCTTGTCT
213▶ S K S F N D P R L C I R K F F P K R K C F V F D W P A P K K Y L A

SapI (1321)
1301 CACCTAGAGCAGCTAAAGGAGGAAGAGCTGAACCTGATTTTCATAGAACAAGTTGCAGAATTTTGTCTACATCCTCAGCCATTCCAATGTCAAGACTC
247▶ H L E Q L K E E E L N P D F I E Q V A E F C S Y I L S H S N V K T

XbaI (1431) **PshAI (1449)**
1401 TTTCAAGTGGCATTGCGATCAATGGGCCTCGTCTAGAGAGCCTGGTGTGACCTACGTCATGCCATCGGCAGTGGGGATCTACCCTGCATGGAGAACGC
280▶ L S G G I A V N G P R L E S L V L T Y V N A I G S G D L P C M E N A
1501 AGTCTGGCCTTGCCAGATAGAGAAGTCAAGCAGTGGAAAAGGCTATTGCCACTATGAACAGCAGATGGGCCAGAAGGTGCAGCTGCCACCGGAA
313▶ V L A L A Q I E N S A A V E K A I A H Y E Q M G Q K V Q L P T E

BspHI (1658)
1601 ACCCTCCAGGAGCTGCTGGACCTGCACAGGGACAGTGAAGAGAGGCCATTGAAGTCTTCATGAAGAAGTCTTTCAAGGATGTGGACCAATGTTCCAGA
347▶ T L Q E L L D L H R D S E R E A I E V F M K N S F K D V D Q M F Q

EcoRI (1749)
1701 GGAAATTAGGGGCCAGTTGGAAGCAAGGCGAGATGACTTTTGAAGCAGAATTCAAAGCATCATCAGATTGTTGCATGGCTTTACTTCAGGATATATT
380▶ R K L G A Q L E A R R D D F C K Q N S K A S S D C C M A L L Q D I F

BstEII (1849) **ScaI (1892)**
1801 TGGCCTTTAGAAGAAGATGTCAAGCAGGGAACATTTTCTAAACCAGGAGGTTACCGTCTCTTTACTCAGAAGCTGCAGGAGCTGAAGAATAAGTACTAC
413▶ G P L E E D V K Q G T F S K P G G Y R L F T Q K L Q E L K N K Y Y

SspI (1943) **XcmI (1955)**
1901 CAGGTGCCAAGGAAGGGGATACAGGCCAAAGAGGTGCTGAAAAAATATTTGGAGTCCAAGGAGGATGTGGCTGATGCATTCTACAGACTGATCAGTCAC
447▶ Q V P R K G I Q A K E V L K K Y L E S K E D V A D A L L Q T D Q S
2001 TCTCAGAAAAGGAAAAAGCGATTGAAGTGAACGTATAAAGGCTGAATCTGCAGAAGCTGCAAGAAAATGTTGGAGGAAATACAAAAGAAGAATGAGGA
480▶ L S E K E K A I E V E R I K A E S A E A A K K M L E E I Q K K N E E

BspLU11I (2133)
2101 GATGATGGAACAGAAAAGAGAAGATTATCAGGAACATGTGAAACAATTGACTGAGAAGATGGAGAGGGACAGGGCCAGTTAATGGCAGAGCAAGAGAAG
513▶ M M E Q K E K S Y Q E H V K Q L T E K M E R D R A Q L M A E Q E K

EcoRV (2287)
NdeI (2280)
2201 ACCCTCGCTCTTAACTTCAGGAACAGGAACGCCTTCTCAAGGAGGGATTGAGAATGAGAGCAAGAGACTTCAAAAAGACATATGGGATATCCAGATGA
547▶ T L A L K L Q E Q E R L L K E G F E N E S K R L Q K D I W D I Q M

MscI (2364)
NheI (2358)
2301 GAAGCAATCATTGGAGCCAATATGTAACATACTCTAAAAGTCCAAGGAGCAAAATTTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGAA
580▶ R S K S L E P I C N I L •

2401 CAAACCACAAC TAGAATGCAGTGA AAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAAGTTA **HpaI (2496)**

2501 ACAACAACAATTGCATTCATTTTATGTTTCAGGTT CAGGGGAGGTGTGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTCTA **EcoRI (2592)**

2601 AAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATG

2701 TGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGGTTTGAAGTCTCTTCATTTCTTTATGTTTTAAAT **SapI (2774)**

2801 GCACTGACCTCCACATTCCTTTTATGTAATAATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGA **SspI (2831) SwaI (2845)**

2901 TGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGGAACCTTAAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGC

3001 TTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTC
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 Y D **SacI (3106) BstXI (3135)**

3101 AGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAG
108 ◀ 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 D F **StuI (3270)**

3201 TCCTTCTGCCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCT
74 ◀ 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 I I E

3301 CCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTGTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACAGCTCCAGATCCGATCCTG
41 ◀ 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 D Q **AseI (3478)**

3401 CTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGG
8 ◀ Q S I N F T K M ◀

3501 ATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAG **SacI (3535)**

3601 TTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAACAACTCCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACC **SpeI (3633)**

3701 GCTATCCACGCCCATTTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAGGT **SnaBI (3761)**

3801 CATGTAAGTGGCATAATGCCAGGCGGGCCATTTACCGTCAATGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCAAGTGGGCA **NdeI (3866)**

3901 GTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGT

4001 TGGGCGTTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACCGCTGAGGTTAATAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGT **PacI (4052) SdaI (4044) BspLU11I (4062)**

4101 AAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGAC

4201 TATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCGCTCTCTGTTCGACCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGG

4301 AAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCC **ApaLI (4376)**

4401 GACCGCTGCGCTTATCCGGTAACTATCGTCTTGTGATCCAACCGGTAAGACAGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAG

4501 CGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGT

4601 TACCTTCGAAAAAGAGTTGGTAGCTCTTGTCCGCAAAACAACACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACCGCGAGAAAA

4701 AAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTA **PacI (4792)**

4801 CATTTAAATCAGCGCCGCAATAAAAATATCTTTATTTTATTACATCTGTGTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAC **EagI (4812) SwaI (4801) NotI (4811)**

4901 AAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCGAGTCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA