



PvuI (7)
SgfI (6)
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGGGGTAACGGAAAGTGATGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCCTTACGCGCCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGGTTGAGTCGCGTTTCTGCCGCCTCCCGCCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGGCTCCCTTGAGCCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)
501 TCTGTTCTGCGCGCTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTACCATTGGGAAGTAAAGAACTCTCAAAGAGGAAGACTTCTT
1 M G S K E L L K E E D F L

BstBI (658)
601 GGGCAGCACAGAAGACAGAGCCGATTTTACCAAGCTATGTTCCCTGTGATGGAGACCTTCGAAATCAATGATCCAGTGCCTCAAGAAGAGAAATGGGGG
13 G S T E D R A D F D Q A M F P V M E T F E I N D P V P K K R N G G
701 ACCTTCTGCATGGCAGTCATGGCCATCCACCTGATCCTGCTCAGGCAGTACTGCAGTCTGCTGATCAAGTTCTCAATCTGCAGGAGCAGCTCCAGA
47 T F C M A V M A I H L I L L T A G T A L L L I Q V L N L Q E Q L Q

XcmI (872) **Acc65I (885)**
801 TGCTAGAGATGTGCTGTGCAATGGATCACTAGCTATCGAGGACAAGCCCTTCTCTGCTGCAGTGGGCACCCAAAACACACCTGGTACCTAGAGACA
80 M L E M C C G N G S L A I E D K P F F S L Q W A P K T H L V P R A Q
901 GGGCTGCAAGCCTTGACAGCCAGCTCAGCTGGTCCATACCAGCCAGGAGCAACTCCGTGACAGTCAACAACTCACTCAAATCCAGAGTTGTTT
113 G L Q A L Q A Q L S W V H T S Q E Q L R Q Q F N N L T Q N P E L F
1001 CAGATTAAGGTGAACGAGGCTCCTCAGGTCCAAAAGGGCCCGGGTCTCCTGGAATCCCCGGGCTGCCTGGGCCAGCTGTGAGAAGGGAGAAAAGG
147 Q I K G E R G S P G P K G A P G A P G I P G L P G P A A E K G E K
1101 GGGCTGCAGTCTGATGGAACCCAGGTGTCCAAGGACCCAGGGCCACCAGGCAGCAAGGGAGAGGCAGGCTCCAGGGACTTACGGGTGCCACAGG
180 G A A G R D G T P G V Q G P Q G P P G S K G E A G L Q G L T G A P G

XhoI (1229) **PshAI (1255)**
1201 GAAGCAAGGAGCAACTGGTGTCCAGGACCTCGAGGAGAGAAGGGCAGCAAAGGTGACATAGTCTCACTGGCCCAAGGGGAACATGGCACCAAGGGA
213 K Q G A T G A P R G E K G S K G D I G L T G P K G E H G T K G

SandI (1369)
NcoI (1364)
1301 GACAAAGGGACCTAGGCCTTCCAGGAACAAAGGGGACATGGGCATGAAGGGAGACACGGGGCCATGGGGTCCCCTGGAGCTCAGGGAGGTAAGGTG
247 D K G D L G L P G N K G D M G M K G D T G P M G S P G A Q G G K G

XcmI (1455)
BstEII (1450)
1401 ATGCTGGAAAACCAGGCCTACCAGGTTTGGCTGGATCTCCAGGAGTCAAAGGTGACCAAGGAAAACCTGGAGTGCAGGGTGTCCAGGCCCTCAAGGTGC
280 D A G K P G L P G L A G S P G V K G D Q G K P G V Q G V P G P Q G A
1501 ACCAGGACTTTCAGGTGCAAGGGTGGCCAGGACGCACTGGTCTTCTGGCCAGCAGGACCCCGGAATTGCTGGGAATCCAGGATTGCAGGTGTG
313 P G L S G A K G E P G R T G L P G P A G P P G I A G N P G I A G V

EcoRI (1622)
1601 AAAGGAAGCAAGGGTGACACAGGAATCAAGGACAGAAAGGCACAAAAGGAGAATCAGGAGTCCCAGGCTTGTAGGCAGAAAGGGAGACACTGGAAGCC
347 K G S K G D T G I Q G Q K G T K G E S G V P G L V G R K G D T G S
1701 CTGGGCTGGCAGTCCCAAAGGAGAACCTGGACGAGTCCGTCAGAAGGGAGACCCGGGATGAAAGGTTCTTCTGGCCAGCAAGGACAAAAGGGAGAAAA
380 P G L A G P K G E P G R V G Q K G D P G M K G S S G Q Q G Q K G E K

BspEI (1829)
MluI (1824)
1801 GGGTCAAAAAGGCAATCTTTCAACGCGTCCGGATCATGGGTGGCACCAACAGAGGCCGAGCTGAAGTTTACTATAACAATGAGTGGGGGACAAATTTGT
413 G Q K G E S F Q R V R I M G G T N R G R A E V Y Y N N E W G T I C

SphI (1940)
1901 GATGATGATTGGGATAATAATGATGCGACTGTCTTCTGTCGATGCTCGTTACTCCAGAGGGAGAGCACTTAGCAGCTATGGAGTGGCTCTGGGAACA
447 D D D W D N N D A T V F C R M L G Y S R G R A L S S Y G G S G N
2001 TCTGGCTGGACAATGTGAATGTCGGGGCACAGAGAACAGTTTGTGGGACTGCAGTAAGAATCCTGGGGCAATCACAATTGCGTACATAATGAAGATGC
480 I W L D N V N C R G T E N S L W D C S K N S W G N H N C V H N E D A

NheI (2120)
2101 GGGTGTGAATGCTCCTGAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTAT
513 G V E C S •

HpaI (2258)
2201 TTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAGTTAAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAG

EcoRI (2354)
2301 GGGGAGGTGTGGGAGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAATACAGCATAGCAAACTTTAACCTCAAATCAAGC
2401 CTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAG

SapI (2536) **SspI (2593)**
2501 TTTAAGATATAGTGATTTTCCCAAGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTATAGTAAATATTC

Swal (2607)

2601 AGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGT

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

BstXI (2897)

2801 ATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCA
 128 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 V

2901 CCTGATGGATCTGTCCACCTCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCAATGGCAAT
 95 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 I

3001 GGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCCGACATGGTGC
 62 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 H

XmnI (3174)

3101 TTGTTGCTCATAGAGCATGGTGTCTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTAT
 28 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 (3240)

3201 AGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAG

SpeI (3395)

3301 CTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGAGTTGTTACGACATTTTGAAAAGTCCCCTTGATTACTAG

3401 TCAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATC

SnaBI (3523)

3501 ATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGT

NdeI (3628)

3601 CATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAA

3701 AGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCTGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAAGTTAT

PacI (3814)

SdaI (3806) BspLU11I (3824)

3801 GTAACGCCGTCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCG

3901 CCCCCGTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTC

4001 GTGCGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATC

4101 TCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAGCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGAGTC

4201 CAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGG

4301 TGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTTTGATCCGGCA

4401 AACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGG

EagI (4574)

PacI (4554) Swal (4563) NotI (4573)

4501 GTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGCCGCAATAAAATATCTTTATTTT

4601 CATTACATCTGTGTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCC

4701 CAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA