



PvuI (7)
SgfI (6) 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAGGTGGCGGGGTAAGTGGAAAGTGATGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) 201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC

301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

401 GGGCCTTTGTCCGGGCTCCCTTGAGGCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)
KasI (535) 501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTACCATTGGCTGCTGGGTGCGGAAACGCGGCCAGCCGGCTTC

601 TGTCGGCCAGCCGAGGAATCTGAAACAATGGCTACAGCGTGCCTGGCAAGAACGCTACCTACTGCTGCGGAAACCGCTACACATTGCTGGTGGCC
13▶ V G Q P A G I W K Q W L Q R A W Q E R Y L L L R E P R Y T L L V A

SfiI (777)
DraIII (745) 701 TCCTGCCTCTGCATAGCAGAGGTGGGCATCACCTTCTGGGTCATTACAGGGTGGCATACACAGAGATTGACTGGAAGGCTACATGGCCAGGTGGAGG

47▶ S C L C I A E V G I T F W V I H R V A Y T E I D W K A Y M A Q V E

NdeI (815) 801 GTTTCATCAATGGCACATATGACTACACACAGCTGCAGGGTGACACCGGACCTTGTCTACCCAGCTGGGTTTTGTACATCTTTACGGGGCTATTCTA

80▶ G F I N G T Y D Y T Q L Q G D T G P L V Y P A G F L Y I F T G L F Y

EcoRV (919) 901 TGCTACTGACCGGGCACTGATCCCTATGGCCAGAACATCTTTGCTGACTCTACCTTGTACCTTGGTGGTGTGTTTTCTTGATATACCACCAGACC

113▶ A T D R G T D I P M A Q N I F A V L Y L V T L V L V F L I Y H Q T

Asp718I (1005)
Acc65I (1005) 1001 TCCAAGTACCTCCCTTCTGCTTTTTCTCATGTGTTGTGCCTTACCGTGTCCATTCCATCTTTGACTGCGGCTTCTCAATGACCCAGTAGCTATGG

147▶ S K V P P F V F F F M C C A S Y R V H S I F V L R L F N D P V A M

1101 CCTTGCTCTTCTGAGCATCAACCTTTCTGGCACAGTGTGGAGTGGGGTGTGCTGTTTCAGCCTGGCTGCTCGGTGAAGATGAATGTGCTGCT

180▶ A L L F L S I N L F L A Q C W S W G C C C F S L A V S V K M N V L L

XmaI (1206) 1201 CTTGCCCCGGGATTGCTATTCCTTCTTACTCAGTTTGGCTTCCGTGGTGCCTCCCAAGCTGGCCATCTGTGCTGCTTTCAGGTGGTGTGGGA

213▶ F A P G L L F L L L T Q F G F R G A L P K L A I C A A L Q V V L G

MscI (1265)
PshAI (1348) 1301 TTGCCCTTCTGCTGGAGAACCATTGGCTACCTATCCCGCTCTTTGACCTTGGTGTGCTGTTCTTTTCCAATGGACAGTAAACTGGCGTTCCTGC

247▶ L P F L L E N P I G Y L S R S F D L G R Q F L F Q W T V N W R F L

1401 CTGAAACCATCTTCTGCATCGTGCCTTCCATCTAGCCCTGTTGGTGGCCACCTTAGCCTCCTTGTGTTGCCCTGTAGGTGGCACAGAACAGG

280▶ P E T I F L H R A F H L A L L A A H L S L L L L F A L C R W H R T G

XmnI (1501) 1501 GGAAGTATTCTGGCACTGCTGAAGATCCTTCCAAAAGGAAAGTTCCACCCCAAGCCCTCACACCTAACAGATTGTTTCCATCCTTTCACCTCCAAC

313▶ E S I L A L L K D P S K R K V P P Q A L T P N Q I V S I L F T S N

1601 TTCATTGGCATCTGCTTAGCCACTCGCTCCACTACCAGTTTATGTCTGGTATTTCCACACACTGCCCTACCTCCTGTGGGCAATGCTGCAGCTGGC

347▶ F I G I C F S H S L H Y Q F Y V W Y F H T L P Y L L W A M P A R W

SnaBI (1752) 1701 TCACACACTGCTCAGTTGCTGGTGTGGACTCATTGAGCTCTCCTGGAATACGTACCCTCACAGTCCCTCAGCTCTGCCCCCTCCACCTGTGCCA

380▶ L T H L L R L L V L G L I E L S W N T Y P S T S F S S A A L H L C H

1801 CGCTGCTGCTGCTGCAGCTCTGGCTGTCCCGAGTCTTCCCTAAGAGCATTAGCAAGCAGGAAAACCTACTGAAACCCACCCCTTCTTCTAGG

413▶ A V V L L Q L W L S P E S F P K S I Q P S R K T H •

MscI (1918)
NheI (1912) 1901 ACGTGCTCAGCAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAA

HpaI (2050) 2001 TTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAGTTAAACAACAACCAATTGCATTATTTATGTTTCAGGTTACAGGGGAGGT

EcoRI (2146) 2101 GTGGGAGGTTTTTAAAGCAAGTAAAACCTTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTT

2201 GAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGACGCTCACCTTCTTTCATGGAGTTAAGAT

SspI (2385) 2301 ATAGTGTATTTCCCAAGTTTGAAGTACTGCTTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTGTAGTAAAATATTCAGAAATAA

SwaI (2399)
EcoO109I (2460) 2401 TTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGCAGAATCCAGATGCTCAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGGACTTA

2501 GGGAAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGT
141 • N R T Y K L P I L E E I T T
BstXI (2689)

2601 TTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATG
126 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 R I
2701 GATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAG
92 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 A E A
StuI (2824)

2801 CACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTGTC
59 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 K N D
BspHI (2974)
BbsI (2970)
XmnI (2966)

2901 CTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAGTC
26 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

3001 GTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTATCTGACGGTCACTAAACGAGCTCTGCTT
AseI (3032)

3101 ATATAGACCTCCCACCGTACACGCCTACGCCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCCTGTTGATTTACTAGTCAAAC
SpeI (3187)

3200 AAACCTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGG

3300 TAATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCCATAAGGTCATGTACTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGAC
SnaBI (3315)

3400 GTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTTACCCTAAATACTCCACCCATTGACGTCAATGAAAGTCCCT
NdeI (3420)

3500 ATTGGCGTACTATGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGC
SdaI (3598)

3600 CTG C A G G T T A A T T A A G A A C A T G T G A G C A A A A G G C C A G C A A A A G G C C A G G A A C C G T A A A A A G G C C G T T G C T G G C G T T T T T C C A T A G G C T C C G C C C C
PacI (3606) BspLU11I (3616)

3698 CTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCG
3798 CTCTCTGTTCCGACCCTGCCGCTTACCGGATACTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGT

3898 TCGGTGTAGGTGCTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACC
ApaLI (3930)

3998 CGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCC
4098 TAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAA
4198 ACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCTTTGATCTTTTCTACGGGGTCTG

4298 ACGCTCAGTGAACGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATTA
PacI (4346) SwaI (4355) EagI (4366)
NotI (4365)

4398 CATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCCAGTG
4498 CAAGTGCAGGTGCCAGAACATTTCTCTATCGAA