



PvuI (7)
SgfI (6) **EcoNI (96)**
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
EcoNI (287)
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)
AgeI (552)
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCCCTACCTGAGATCACCGGTACCATGGCTTGCCTTGGATTCAGCGGCACAAGGCTCAGCT
1▶ M A C L G F Q R H K A Q L

EcoO109I (613) **BbsI (658)** **BbrPI (676)**
601 GAACCTGGCTGCCAGGACCTGGCCCTGCACTCTCTGTTTTTCTTCTTTCATCCCTGTCTTCTGCAAAGCAATGCACGTGGCCACGCTGCTGTGGTA
13▶ N L A A R T W P C T L L F F L L F I P V F C K A M H V A Q P A V V

MscI (701) **NsiI (740)**
701 CTGGCCAGCAGCCGAGGCATCGCCAGCTTTGTGTGTGAGTATGCATCTCCAGGCAAAGCCACTGAGGTCGGGTGACAGTGCCTCGGAGGCTGACAGCC
47▶ L A S S R G I A S F V C E Y A S P G K A T E V R V T V L R Q A D S

PshAI (804)
801 AGGTGACTGAAGTCTGTGCGCAACCTACATGATGGGGAATGAGTTGACCTTCTAGATGATTCATCTGCACGGCACCTCCAGTGGAAATCAAGTGAA
80▶ Q V T E V C A A T Y M M G N E L T F L D D S I C T G T S S G N Q V N

NcoI (923)
901 CCTCACTATCCAAGGACTGAGGGCCATGGACACGGGACTCTACATCTGCAAGGTGGAGCTCATGTACCCACCGCCATACTACCTGGGCATAGGCAACGGA
113▶ L T I Q G L R A M D T G L Y I C K V E L M Y P P P Y Y L G I G N G

BamHI (1055)
1001 ACCAGATTTATGTAATTGATCCAGAACCCTGCCAGATTCTGACTTCTCTCTGGATCCTTGACAGTTCAGTTCGGGGTGTTTTTTTATAGCTTTC
147▶ T Q I Y V I D P E P C P D S D F L L W I L A A V S S G L F F Y S F

1101 TCCTCACAGCTGTTTCTTTGAGCAAAATGCTAAAGAAAAGAAGCCCTTACAACAGGGGTCTATGTGAAAATGCCCAACAGAGCCAGAATGTGAAAA
180▶ L L T A V S L S K M L K K R S P L T T G V Y V K M P P T E P E C E K

NheI (1241)
BstXI (1238) **MscI (1247)**
1201 GCAATTTACGCTTATTTTATCCCATCAATTGAGAAACCAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAAT
213▶ Q F Q P Y F I P I N •

HpaI (1379)
1301 GCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAATTGCATT

EcoRI (1475)
1401 CATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAAA
1501 ACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGCTGTTGCCAATGTGCATTAGCTGTTTGA

SapI (1657)
1601 GCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTCCAAGTTTGAAGTACTCTTCAATTTCTTTATGTTTTAAATGCACTGACCTCCCACAT

SspI (1714) **Swal (1728)** **EcoO109I (1789)**
1701 TCCCTTTTATAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCAT
1801 AATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATTTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTAC
141▶ • N R T Y

1901 TTGAGGGGATGAGTTCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGC
135▶ 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 S I L E R C

BstXI (2018)
2001 ACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCT
102▶ 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 D K Q G N S

StuI (2153)
2101 CACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGT
69▶ 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 G T K T R

BbsI (2299)
XmnI (2295)
2201 ATGGCCGCCCGACATGGTGCTTGTGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGG
35▶ 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 Q S I N F T

BspHI (2303) **AseI (2361)**
2301 TCTTCATGATGGCCCTCCTATAGTGAGTCGATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTA
2▶ K M

2401 TCTGACGGTTCACATAACAGACTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTCGCTCAATGGGGCGGAGTTGTTACGACATTTTGG

2501 AAAGTCCCGTTGATTTACTAGTCAAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAAATCCCCGTGAGTCAAACCGCTATCCACGCCCATG
SpeI (2516)
←

2601 ATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCACTGTACTGGGCATAAT
SnaBI (2644)

2701 GCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTC
NdeI (2749)

2801 CACCCATTGACGTCAATGAAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGC

2901 GGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATTAAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGCT
PstI (2928)
SdaI (2927)
PacI (2935)
BspLU11I (2945)
←

3001 GGGGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCG
 3101 TTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTC

3201 ATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCGCTGCGCCTTATC
ApaLI (3259)

3301 CGGTAACATATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGT
 3401 GCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAG
 3501 TTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGA

3601 TCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCTAGGCTAGTTAATTAACATTTAAATCAGCGGCC
PacI (3675) SwaI (3684) EagI (3695)
NotI (3694)

3701 GCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAA
 3801 ACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA