



PvuI (7)
SgfI (6)
MfeI (82) **EcoNI (96)**

1 GGATCTGGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTCGCAACGGGTTTCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGCTTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441) **NaeI (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACCGGTACCCATGGCGGCCCTCATGCTTGGTCTGCTGGCGCTGTGTCT
BstEII (555) **AgeI (552)**

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1▶ M A A S C L V L L A L C L

Eco47III (632) **AfeI (632)**

601 GCTGCTGCCGCTGCTGCTGCTGGGAGGATGGAAGCGCTGGCGCCGGGGCGGGCCCGGCATGTAGTAGCGGTGGTGTGGGCGACGTGGGCCGAGC
 13▶ L L P L L L L G G W K R W R R G R A A R H V V A V V L G D V G R S

BstEII (747)

701 CCCGATGCAGTACCACGCGCTGCTGTTGGCCATGCACGGCTTCTCGGTGACCTCCTGGGTTCTGCAACTCCAAACCCATGATGAGCTCTTGCAGA
 47▶ P R M Q Y H A L S L A M H G F S V T L L G F C N S K P H D E L L Q

EcoRI (806)
Bsp120I (850)

801 ACAACAGAATTCAGATTGTTGGGTTGACAGAACTTCAGAGTCTTGCACTTGGGCCCCGAGTTTCCAGTACGGAGTCAAAGTTGACTTCAGGCTATGTA
 80▶ N N R I Q I V G L T E L Q S L A V G P R V F Q Y G V K V V L Q A M Y
 901 CTTGCTGTGGAAGTTGATGTGGAGGGAGCCAGGTGCCTATATCTTCTCAGAACCCCGAGTCTGCCTAGCATTGCTGTCTGCTGGTTCGTGGGCTGC
 113▶ L L W K L M W R E P G A Y I F L Q N P P G L P S I A V C W F V G C
 1001 CTTTGTGGAAGCTCGTCATTGACTGGCACAACACTGGCTACTCCATCATGGTCTGGTGCATGGCCCAACCATCCCTCGTTCTGCTGGCCAAGT
 147▶ L C G S K L V I D W H N Y G Y S I M G L V H G P N H P L V L L A K
 1101 GGTACGAGAAGTTCTTTGGGCGCCTGTCCACCTGAACCTGTGTGTTACCAATGCTATGCGAGAAGACCTGGCGGATAACTGGCACATCAGGGCTGTGAC
 180▶ W Y E K F F G R L S H L N L C V T N A M R E D L A D N W H I R A V T

BspHI (1262) **SphI (1277)** **Bsp120I (1295)**

1201 CGTCTACGACAAGCCCGCATCTTTCTTTAAAGAGACACCTCTGGACCTGCAGCACCGGCTCTTCATGAAGCTGGGCAGCATGCACCTCCGTTTCAGGGCC
 213▶ V Y D K P A S F F K E T P L D L Q H R L F M K L G S M H S P F R A

Tth111I (1315)

Bsu36I (1309)
MluI (1372)

1301 CGCTCAGAACCTGAGGACCCAGTACCGAGCGGTGGCCCTTACGGAGCGGGATGCTGGGAGCGGGCTGGTGCAGCGTCTCCGTGAGCGGCCAGCCCTGC
 247▶ R S E P E D P V T E R S A F T E R D A G S G L V T R L R E R P A L
 1401 TGGTCAGCAGCACGAGCTGGACAGAGGACGAAGACTTCTCCATCCTGCTGGCAGCTTTAGAAAAGTTTGAACAACTGACTCTTGATGGACACAACCTTCC
 280▶ L V S S T S W T E D E D F S I L L A A L E K F E Q L T L D G H N L P

XmnI (1566)

1501 TTCTCTGCTGTGTGATAACAGGCAAAGGGCCTCTGAGGGAGTATTATAGCCGCTCATCCACGAAAGCACTTCCAGCACATCCAGGTCTGCACCCCC
 313▶ S L V C V I T G K G P L R E Y Y S R L I H Q K H F Q H I Q V C T P
 1601 TGGCTGGAGGCCGAGGACTACCCCTGCTTCTAGGGTGGCGGACCTGGGTGTCTGTCTGCACACGCTCCAGTGGCCTGGACCTGCCATGAAGGTGG
 347▶ W L E A E D Y P L L L G S A D L G V C L H T S S S G L D L P M K V

BspLUIII (1703)

1701 TGGACATGTTGGGTGCTGTTTGGCTGTGTGTGCTGTAACCTCAAGTGTTTACATGAGCTGGTGAACATGAAGAAAATGGCCTGGTCTTTGAGGACTC
 380▶ V D M F G G C C L P V C A V N F K C L H E L V K H E E N G L V F E D S

PvuII (1816)
BspEI (1871)

1801 AGAGGAACTGGCAGCTCAGCTGCAGATGCTTTTCTCAAACCTTCTGATCCTGCGGGCAAGCTAAACAGTTCGGAAAGAACCTGCGGGAGTCGCAGCAG
 413▶ E E L A A Q L Q M L F S N F P D P A G K L N Q F R K N L R E S Q Q

NheI (1971)

1901 CTCCGATGGGATGAGAGCTGGGTGCAGACTGTGCTCCCTTTGGTTATGGACACATAACTCCTGGCCAGAGGCTAGCTGGCCAGACATGATAAGATACAT
 447▶ L R W D E S W V Q T V L P L V M D T •

2001 TGATGAGTTTGGACAAACCAACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGC

HpaI (2109)
MfeI (2120)

2101 AATAACAAGTTAAACAACAATTCATTCTTTTATGTTTCAGGTTACGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTG

EcoRI (2205)

2201 GTATGGAATCTAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTGAACTCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGG
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2301 GCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGGTTTGAAGTACTCTTCAATTTCT

SspI (2444) **SwaI (2458)**

2401 TTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTGTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTA
 2501 GGCAGAATCCAGATGCTCAAGGCCCTTCAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAAATTGGACAGCAAGAAA

2601 GCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGT
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

2701 CAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCAC
112 P A Y D 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

2801 AATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACA
79 I T D F 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

2901 GCAGAGATGATCTCCCAGTCTTGGTCTGTGATGGCCGCCGACATGGTGTCTGTTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCA
45 A S I I E 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

BspHI (3033)

3001 GCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGT
12 E L D Q Q S I N F T K M

AseI (3091)

3101 CAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTCGCT

SpeI (3246)

3201 CAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCC

SnaBI (3374)

3300 CCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGGACTAATACGTAGATGTACTGCCAAGTAGGA

NdeI (3479)

3400 AAGTCCCATAAAGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTA

3500 CTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAA

SdaI (3657) PacI (3665) BspLU11I (3675)

3600 TGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCA
AAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGG

3698 AAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGG

3798 CGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCG

ApaLI (3989)

3898 CCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGA

3998 ACCCCCCGTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGT

4098 AACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCG

4198 CTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTGTTTGCAAGCAGCA

4298 GATTACGCGCAGAAAAAAGGATCTCAAGAAGATCTTTGATCTTTTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTC

EagI (4425)

PacI (4405) SwaI (4414) NotI (4424)

4398 ATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATA

4498 CGCTCTCCATCAAAAACAAACGAAACAAACAACTAGCAAAATAGGCTGTCCCCAGTGCAAGTGACGGTGCCAGAACATTTCTCTATCGAA