



PvuI (7)
SgfI (6)
MfeI (82)

1 GGATCTGCATCGCTCCGGTGCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)

Psp1406I (203)
PvuII (239)
Bsu36I (291)

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

AgeI (552)
SphI (560)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCTACCTGAGATCACCGGTGAGTGCATGGCTGGCTGCTCCTGGTCTGGTCCAGGGGCT

1 ▶ M H G W L L L V W V Q G L

PstI (665)

601 GATACAGGCTGCCTTCTCGCTACAGGACCCAGCAGGCACGATAGATACAAGAGGAACATCTCTGCAGAGGAAGTGGCTGTGCATCTTACAGTGT

13▶ I Q A A F L A T G A T A G T I D T K R N I S A E E G G S V I L Q C

SalI (733)

PvuII (716)
PshAI (726)
MscI (761)

701 CACTTCTCCTCTGACACAGCTGAAGTGACCCAAGTCGACTGGAAGCAGCAGGACCAGCTTCTGCCATTTATAGTGTGACCTGGGGTGGCATGTCGCTT

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

AvrII (834)

EcoO109I (825)
StuI (837)
ScaI (878)
SnaBI (897)

801 CAGTCTTCAGTGATCGGGTGGTCCCAGGCCAGCCTAGGCCTCACCTTCCAGTCTCTGACAAATGAATGACACGGGAGAGTACTTCTGTACCTATCATA

80▶ S V F S D R V V P G P S L G L T F Q S L T M N D T G E Y F C T Y H T

SspI (927)

NcoI (989)

901 GTATCCTGGTGGGATTTACAAGGGGAGAATATTCTGAAGGTCCAAGAAAGCTCAGTGGCTCAGTTCAGACTGCCCGCTTGAGGAACCATGGCTGCT

113▶ Y P G G I Y K G R I F L K V Q E S S V A Q F Q T A P L G G T M A A

XmnI (1064)

1001 GTGCTGGGACTCATTGCTTAATGGTACAGGAGTACTGTACTGGCTAGAAAGAAGTCTATTAGAATGCATTCTATAGAAAGTGGCCTTGGGAGAACAG

147▶ V L G L I C L M V T G V T V L A R K K S I R M H S I E S G L G R T

BstXI (1108)
Bsu36I (1122)

1101 AAGCGGAGCCACAGGAATGGAACCTGAGGAGTCTCTCATCCCCTGGAAGCCCTGTCCAGACACAAACTGCCCTGCTGGTCCCTGTGGAGAGCAGGCAGA

180▶ E A E P Q E W N L R S L S S P G S P V Q T Q T A P A G P C G E Q A E

MscI (1294)

NheI (1288)

1201 AGATGACTATGCTGACCCACAGGAATACTTTAATGTCCTGAGCTACAGAAGCCTAGAGAGCTTATTGCTGTATCGAAGACTGGCTAAGCTAGCTGGCCA

213▶ D D Y A D P Q E Y F N V L S Y R S L E S F I A V S K T G •

1301 GACATGATAAGATACATTGATGAGTTTGACAAACCACAAGTGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTG

HpaI (1426) **MfeI (1437)**

1401 TAACCATTATAAGCTGCAATAAAACAGTTAAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGAGGTTTTTAAAGCAAGTA

EcoRI (1522)

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1501 AAACCTCTACAAATGTGGTATGGAATTTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATA

1601 AGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAGATATAGTGTATTTTCCCAAGGTTTGA

SapI (1704)
SspI (1761)
SwaI (1775)

1701 ACTAGCTCTTCATTTCTTTATGTTTTAATGCACTGACCTCCACATTCCTTTTTAGTAAAAATTCAGAAATAATTTAAATACATCATTGCAATGAAA

EcoO109I (1836)

1801 ATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGA

1901 AATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTTCATCTC

141 ▶ • N R T Y K L P I L E E I T T K V L K G N M E

SacI (2036) **BstXI (2065)**

2001 AATGAGCACAAGCAGTCAGGAGCATAGTCAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATGCTGCCACCTCATCAGAGTAG

118▶ 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 S R D V E D S Y

2101 GGGTCCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCCAGCAGACAGTACCCTGCCAATGT

84▶ 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 C V T V R G I Y

StuI (2200)

2201 AGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTTGTCTCATAGAGCATGGTGTCTTCTC

51▶ 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 E Y L M T I K E

2301 AGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTA
18 T A V E V L E L D Q Q S I N F T K M

XmnI (2342)

2401 TGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGC

AseI (2408)

SacI (2465)

2501 CTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATTGACGTCAATGGGGT

SpeI (2563)

2601 GGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGAT

SnaBI (2691)

2701 GTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTAAGTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATA

NdeI (2796)

2801 TGATACACTTGATGTAAGTGGGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACG

2901 TCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATAAGAACATGTGA

PacI (2982)

PstI (2975)

SdaI (2974)

BspLU11I (2992)

3001 GCAAAAGGCCAGCAAAGGCCAGGAACCGTAAAGGCCGCGTTGCTGGCGTTTTTTCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCT

3101 CAAGTCAGAGGTGGCAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGCTTAC

3201 CGGATACCTGTCCGCTTTTCCCTTCGGAAGCGTGGCGTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTG

3301 GGCTGTGTGCACGAACCCCCGTTCCAGCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGG

ApaLI (3306)

3401 CAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGT

3501 ATTTGGTATCTGCCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTT

3601 GTTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTT

3701 AAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAA

EagI (3742)

PacI (3722) SmaI (3731) NotI (3741)

3801 TCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCT

3901 ATCGAA