



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

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGCGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGGTAAACTGGAAAAGTGTGCTGTACTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)

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

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCCGCCGCTACCTGAGGGC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCCGGCTCTCCACGCTTTCCTGACCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)

AgeI (552) NcoI (560)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCACCATGGTAGCACACAACCAGGTGGCAGCCGACAATGCAGT

601 CTCACAGCAGCAGAGCCCCGACGGCGGCCAGAACCTTCTCTCTTCTCTCTCTCTCGCCCCGGCCCCGCGCGCCCGGCGCTGCCCGCGGTCCCG
13▶ S T A A E P R R R P E P S S S S S S S P A A P A R P R P C P A V P

XcmI (770)

701 GCCCCGGCCCCGGCGACACGCACTTCCGCACATTCCGTTTCGACGCGGATTACCGGCGCATCACGCGCCAGCGGCTCCTGGACGCTGCGGATTCT
47▶ A P A P G D T H F R T F R S H A D Y R R I T R A S A L L D A C G F

BsrBI (832)

801 ACTGGGGCCCTGAGCGTGCACGGGGCGCACGAGCGGCTGCGCGCCGAGCCCGTGGGCACCTTCTGGTGCAGCACAGCCGCGCAAGTCTTTTT
80▶ Y W G P L S V H G A H E R L R A E P V G T F L V R D S R Q R N C F F

SandI (924) **NgoMIV (955)**

901 CGCCCTTAGCGTGAAGATGGCCTCGGGACCCACGAGCATCCGCGTGCCTTTCAGGCCGGCGCTTTCACCTGGATGGCAGCCGCGAGAGCTTCGACTGC
113▶ A L S V K M A S G P T S I R V H F Q A G R F H L D G S R E S F D C

PstI (1081)

DraIII (1018) **SphI (1040)** **NotI (1074)**

1001 CTCTTCGAGCTGTGGAGCACTACGTGGCGGCGCCGCGCCGATGCTGGGGCCCCGCTGCGCCAGCGCCGCTGCGGCGCTGCAGGAGCTGTGCCGCC
147▶ L F E L L E H Y V A A P R R M L G A P L R Q R R V R P L Q E L C R

MscI (1109)

1101 AGCGCATCGTGGCCACCGTGGCCGCGAGAACCTGGCTCGCATCCCCCTCAACCCGCTCCTCCGACTACCTGAGCTCCTTCCCCTTCCAGATTGACC
180▶ Q R I V A T V G R E N L A R I P L N P V L R D Y L S S F P F Q I •

MscI (1250)

NheI (1244)

1201 GGCAGCGCCCGCGTGCACGCAGCATTAACTGGGATGCCGTGTTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAGT

HpaI (1382) **MfeI (1393)**

1301 AATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGC

EcoRI (1478)

1401 ATTCATTTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTTACAAATGTGGTATGGAATTTCTAAAATACAGCATAGC

1501 AAAACTTAACTCCAAATCAAGCCTCTACTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTT

SapI (1660)

1601 GCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCCA

SspI (1717) **SwaI (1731)**

1701 CATTCCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTT

1801 CATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTG
141▶ • N R T

1901 TACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTC
136▶ 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 P A Y D S I L E R

BstXI (2021)

2001 TGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTT
103▶ C 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

StuI (2156)

2101 GCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTC
70▶ S 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

XmnI (2298)

2201 CTGATGGCCGCCCGACATGGTGTGTTGTCCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGA
36▶ 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 E L D Q Q S I N F

BbsI (2302) **AseI (2364)**
 2301 AGGTC**TT**CATGGTGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGC
 3 T K M
 2401 TTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGCGGAGTTGTTACGACATTT

SpeI (2519)
 2501 TGGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCCCA

SnaBI (2647)
 2601 TTGATGTACTGCCAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCAT

NdeI (2752)
 2701 AATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCAGTTTACCGTAAATA
 2801 CTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCA

PacI (2938)
PstI (2931)
SdaI (2930) **BspLU11I (2948)**
 2901 GCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAA**TAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCGTT**
 3001 GCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAG
 3101 GCGTTTTCCCCTGGAAGCTCCCTCGTGCGCTCTCTGTTCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTT
 3201 CTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCGACCGCTGCGCCTT
 3301 ATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGC
 3401 GGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAA
 3501 GAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGA

PacI (3678) **SwaI (3687)** **NotI (3697)**
 3601 AGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCG
 3701 GCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAA
 3801 CAAACCTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA