



100

PvuI (7)
SgfI (6) 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGTGTCGTGTAAGTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Psp1406I (203) 201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGGC

301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NgoMI (441)
NaeI (441) 401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)
AgeI (552) 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCGCTACCTGAGATCACCGGTCCACCATGGCTGACCAACTCTTGCCTAAAAAGAGAAGATTTT

601 TATCCATTGAGTGGTGCAGGCACAATAAATGCCTTGCCTGATTGCCTATTAGAGGATGAAGTTATTAGCCAGGAAGACATGAACAAAGTGAAGATGAA

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

PshAI (755)
EcoO109I (753) 701 AATGACACTGTCATGATAAGGCTCGAGTCTTGATTGACCTGTTACTGGAAAAGGACCAAGTCTTGTCTGCAATTTATCAAGCATCTCTGTGAAGAAG

47▶ N D T V M D K A R V L I D L V T G K G P K S C C K F I K H L C E E

MscI (865)
BalI (865)
NheI (859) 801 ACCCTCAACTTGCCTCAAAGATGGGTTTGCCTAAGAGAGAAGATGAACTCTGGAGCAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGG

80▶ D P Q L A S K M G L H •

HpaI (997) 901 ACAAACCACAAC TAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTT

MfeI (1008) 1001 AACAAACAACATTGCATTCTTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGGGTATGGAATTTCT

EcoRI (1093) 1101 AAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAAT

1201 GTGCATTAGCTGTTTGCAGCCTCACCTTCTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAA

SspI (1332) 1301 TGCACTGACCTCCACATTCCCTTTTGTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTTATTAGGCAGAAATCCAG

Swal (1346) 1401 ATGCTCAAGGCCCTTCAATATCCCCAGTTTGTAGTGGACTTAGGGAACAAAGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAG

EcoO109I (1407) 1501 CTTTATGTTCTGGTGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGT

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 P A Y D

SacI (1607) 1601 CAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAA

108▶ 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 I T D F

StuI (1771)
Eco147I (1771) 1701 GTCCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATC

75▶ 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 A S I I

1801 TCCCAGTCTTGGTCTGATGGCCGCCGACATGGTCTTGTGTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCT

41▶ 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 E L D Q

BspHI (1921)
VspI (1979)
AseI (1979) 1901 GCTGAGAGATGTTGAAGGCTTTCATGATGGCCCTCTATAGTGTGATTACTATGCGGATATACTATGCCGATGATTAATTGTCAAACAGCGTG

8▶ Q S I N F T K M

SacI (2036) 2001 GATGGCGTCTCCAGCTATCTGACGGTCACTAAACGAGCTCTGTTATATAGACCTCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGA

SpeI (2134) 2101 GTTGTACGACATTTTGGAAAGTCCCGTTGATTACTAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAA

SnaBI (2262)
Eco105I (2262) 2200 CCGCTATCCACGCCATTGATGTAAGTGCACAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTGCACAAAGTGGAAAGTCCATAAG

NdeI (2367)

2300 GTCATGACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGACTGCCAAGTGGG

2400 CAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTC

PstI (2546)
SdaI (2545) PacI (2553) BspLU11I (2563)

2500 GTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGCCAGCAAAAGCCAGGAA

2598 CCGTAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACA

2698 GGACTATAAAGATACCAGGCGTTTTCCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCCTTTCTCCCTT

ApaLI (2877)

2798 CGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTCA

2898 GCCCAGCCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGC

2998 AGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGC

3098 CAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTGTTTGAAGCAGCAGATTACGCGCAG

PacI (3293)

3198 AAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGCTGACGCTCAGTGGAAACGAAAACACGTTAAGGGATTTTGGTCATGGCTAGTTAA

EagI (3313)
SwaI (3302) NotI (3312)

3298 TTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCA

3398 AAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA