



100

**PvuI (7)**  
**SgfI (6)**  
 1 GGATCTGCATCGCTCCGGTGCCTGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

**MfeI (82)**  
 101 GAGAAGGTGGCGGGGTAACCTGGAAAGTGATGTCGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)**  
**Psp1406I (203)** **PvuII (239)** **Bsu36I (291)**  
 201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC

301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGTCTTTGTTTCGTTT

**SmaI (592)**  
**EcoO109I (592)**  
**BamHI (586)**  
**AgeI (552)** **BspLU11I (560)**  
 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCCCTACCTGAGATCACCGGTCAACATGTCTGCGGGAGACCCCGCGTGGGATCCGGGTCCCT

**EagI (692)**  
 601 GGACTCCTTCATGTTTCCATACCCTTGGTCGCGCTTAACGTGGGAGTGAGGGCGCCCTATCGCTGTTCTTGAACCCCTGGACGCCCCGTGGCGCCGAC

**BstXI (617)**  
 13▶ D S F M F S I P L V A L N V G V R R R L S L F L N P R T P V A A D

**ScaI (731)**  
 701 TGGACCTTGTGCGGAGGAGATGGGCTTCGAGTACTGGAGATCCGAGAGCTGGAACGCGCCTGACCCACTCGAGTTTGTGGATGCCTGGCAGG

47▶ W T L L A E E M G F E Y L E I R E L E T R P D P T R S L L D A W Q  
 801 GGCCTCTGGCGCTGTGCGCAGGCTGCTAGAGCTGCTGGCCTTGTAGACCGTGAGGATATACTGAAGGAGCTGAAGTCGCGCATCGAGGAGGACTG

80▶ G R S G A S V G R L L E L L A L L D R E D I L K E L K S R I E E D C

**MscI (953)**  
 901 CCAGAAATACTTAGGTAAGCAGCAGAACCAGGAGTCCGAGAAGCCTTTACAGGTGGCAAAGCAGTGTCCCAAAAACAAAGAACTGGGAGGC

113▶ Q K Y L G K Q Q N Q E S E K P L Q V A R V E S S V P Q T K E L G G

**AvrII (1020)** **EcoRV (1072)**  
 1001 ATCACCACCCTTGATGACCCCTAGGACAAAACGCGGAACTTTTCGATGCCTTTATCTGCTACTGCCCAATGATATCGAGTTTGTGAGGAGATGATCC

147▶ I T T L D D P L G Q T P E L F D A F I C Y C P N D I E F V Q E M I  
 1101 GGCAACTAGAACAGACAGACTATCGGCTTAAGTTGTGTGCCGACCGTGACCTGCGCCGACCTGTGTCTGGTCCATTGCCAGCGAGCTAATTGA

180▶ R Q L E Q T D Y R L K L C V S D R D V L P G T C V W S I A S E L I E  
 1201 GAAAAGGTGTCGCGCATGGTGGTGGTGGTTTCTGACGATTATCTACAGAGCAAAGAAATGTGACTTCCAGACCAAGTTTGCAGCTCAGCCTGTCCAGGT

213▶ K R C R R M V V V V S D D Y L Q S K E C D F Q T K F A L S L S P G  
 1301 GTCCAACAGAAAAGACTGATTCTATTAATAACAAGCGATGAAGAAGGACTTTCAGTATCTGCGGTTTCATCACTATATGCAGCTATACCAACCTT

247▶ V Q Q K R L I P I K Y K A M K K D F P S I L R F I T I C D Y T N P

**NdeI (1490)**  
 1401 GCACCAAGTCTGTTTCTGGACCCGCTTGCACAAGCTTTGTCCTGCCCAGATCCTATCCCTATGATGTGCCAGACTATGCTGGCTATCCATATGATGT

280▶ C T K S W F W T R L A K A L S L P R S Y P Y D V P D Y A G Y P Y D V

**MscI (1553)**  
**NheI (1547)**  
 1501 TCCTGATTATGCTGGATACCCTTATGATGTGCCAGACTATGCCTAAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAC

313▶ P D Y A G Y P Y D V P D Y A •

**HpaI (1685)** **MfeI (1696)**  
 1601 TAGAATGCAGTGAAAAAATGCTTTATTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAAACAACAAT

**EcoRI (1781)**  
 1701 TGCATTCATTTTATGTTTCAGGTTACGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCAT

1801 AGCAAACTTTAACTCCAATCAAGCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGATTAGCTG

**SapI (1963)**  
 1901 TTTGAGCCTCACCTTTTCATGGAGTTTAAAGATATAGTGATTTTTCCCAAGTTTGAAGTCTCTTCAATTTTATGTTTTAAATGACTGACCTC

**SspI (2020)** **SwaI (2034)** **EcoO109I (2095)**  
 2001 CCACATCCCTTTTATAGTAAAATATTAGAAATAATTTAAATACATCATTGCAATGAAAAATAATGTTTTTATTAGGAGAATCCAGATGCTCAAGGCC

2101 CTTAATAATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAAGAAATTTGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTCTG

141▶ • N R

**SacI (2295)**  
 2201 GTGTAATTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCT

137▶ T Y K L P I L 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

**BstXI (2324)**  
 2301 CTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCC

104▶ 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 D K Q G

**StuI (2459)**  
 2401 GTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCAATGATGGCCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTG

71▶ 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 E G T K  
 2501 GTCCTGATGGCCGCCGACATGGTCTTGTCTCCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACAGCTCCAGATCCTGCTGAGAGATGT

37▶ 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 Q S I N

**BspHI (2609)**  
**BbsI (2605)**  
**XmnI (2601)**

2601 TGAAGGCTTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCC  
 4 F T K M

**AseI (2667)**

2701 AGCTTATCTGACGGTTCACATAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACA

**SacI (2724)**

2801 TTTTGAAAGTCCCCTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAAATCCCCGTGAGTCAAACCGCTATCCACG

**SpeI (2822)**

2900 CCCATTGATGACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGG

**SnaBI (2950)**

**NdeI (3055)**

3000 GCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTA

3100 AATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCA

**PstI (3234)**  
**SdaI (3233)**  
**PacI (3241)**  
**BspLUII (3251)**

3200 GCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTG C A G G T T A A T T A A G A A C A T G T G A G C A A A A G G C C A G A A A G G C C A G G A A C C G T A A A A A G G C

3298 CGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGA

3398 TACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGAAGCGTGG

**ApaLI (3565)**

3498 CGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTG

3598 CGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTAT

3698 GTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCG

3798 GAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATC

**PacI (3981)**   **SwaI (3990)**

3898 TCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAA

**EagI (4001)**  
**NotI (4000)**

3998 TCAGCGGCCCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAAACAAAACGAA

4098 ACAAACAAACTAGCAAATAGGCTGTCCCAAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA