



EcoRI (23)

NotI (2) XbaI (19) SdaI (38) SpeI (45)

1 GCGGCCGCGTCGACGATATCTAGAATTCGGATCCTGCAGGGCCCAGTGCATGGATGGTTGTGAACCACCATG

BspEI (93)

75 TGGTTGCTGGGATTTGAACTCCGGACCTTTGGAAAAGAAGTCGGGTGCTCTTACCCACTGAACCATCTCACCAG

149 CCCCACAGCAAACCTTTATACAAGAAGAAGAGGGCTGTGTTGAGGGCCTAGACTTCATTTTCTTCTCCTCTTC

223 CTCCTCCTCCTTTTCTTCTTCTTCTTCTTCTCCTCCTCCTCCTCCTCCTCCCCCTTCTTCTCCTCTTC

297 CTCCTCCTTCTTTTTCCAAGACAGGATTTCCCTGTGTAGCCCTGCCTATCCTGAAACTCACTCTATAGACCAGA

371 CTGGCCTCAAACCTCATAGAAATCCACCTGCCTCTGCCTCCCGAGTGCTAGGATTAAGGCATGACTCACCACCA

445 CCGACTCTGGGCTGTATTTTCTTCTATTTGTTGGCATACTTTTGCACAAGAACCTCTATGGCTCCCTTCCCAC

519 AGAGCCAACTTTTACATGGCTTCTGTACTCCAAGAAGTTCTACTCTGGACCTCTCCAGGAGCCTGGTGTGAG

593 TATGTCTCCTGAATTGTCTGCTTGTATCTCCTCCTAGAGTTAGATAAGGGTTGTCCAGGGCAGAGGAGT

AgeI (699)

667 CAAGGTCAGATTCATTTAAGTAACAGTTCTCAACCGGTGGGTCATCACCATTAGAGAACACATATTTCCAATGG

741 TCTTAGGAAGTACAGACCTCTCAGTAGCAAAATTACAGTTTTGAAGTAGCAACAAAATTAATTTATGGTTGG

815 GGGTTCCTAAGACCATCAGAAATGTGTGCAGTTGCCACCCACAGGTTGAAAAGTCTGATTGAGAAGGTTGGTG

889 TGCATTTAGCTAAATTCAGGCCCCTCTTCCAGAGCAAGGCAACCACAGGAGACCAGCTGACCTAAGAGAT

963 GACCCACAGTGGGACAGAGGGAGTTAGAAACTGGCTGTCCCTAGAAGATTGAGGAGCAACCCCTTCCCAGGG

1037 GGTCTCTCAAGAACCCAAAGCTGTGCTACCCAGGCAGGACCACCTTCGAGTCTAGCAGACCAGCTGATGAAG

EcoNI (1119)

1111 CTGCCCTCCCATAGGGTCCCTGGAGGGATGGTGCCTCCCTGGGTCTCAATTTGCATGGCAGGAAGGGGCCTAA

1185 TGGGGAAGAGGCGGAGAGGAGACAAGCTGCAGCCCAGGCTGACATACAGTTACATGTTTCGCCCCCAAACCTCC

NcoI (1283)

1259 TTGGGCTCAGAGACAGAGCAGTGACCATGGTTCTGGGGCCCTGCATGCTGCTGCTGCTGCTGCTGCTGGGCCTG

1333 AGGCTACAGCTCTCCCTGGGCATCATCCCAGTTGAGGAGGAGAACCCGGACTTCTGGAACCGCGAGGCAGCCGA

17 R L Q L S L G I I P V E E E N P D F W N R E A A E

1407 GGCCCTGGGTGCCGCAAGAAGCTGCAGCCTGCACAGACAGCCGCAAGAACCTCATCATCTTCTGGGCGATG

41 A L G A A K K L Q P A Q T A A K N L I I F L G D

1481 GGATGGGGGTGTCTACGGTACAGCTGCCAGGATCCTAAAAGGGCAGAAGAAGGACAAACTGGGGCCTGAGATA

66 G M G V S T V T A A R I L K G Q K K D K L G P E I

NdeI (1578)

1555 CCCCTGGCTATGGACCGCTTCCCATATGTGGCTCTGTCCAAGACATACAATGTAGACAAAACATGTGCCAGACAG

91 P L A M D R F P Y V A L S K T Y N V D K H V P D S

1629 TGGAGCCACAGCCACGGCCTACCTGTGCGGGGTCAAGGGCAACTTCCAGACCATTGGCTTGAGTGCAGCCGCC

115 G A T A T A Y L C G V K G N F Q T I G L S A A A

1703 GCTTTAACCAGTGCAACACGACACGCGGCAACGAGGTGATCTCCGTGATGAATCGGGCCAAGAAAGCAGGGGAAG

140 R F N Q C N T T R G N E V I S V M N R A K K A G K

1777 TCAGTGGGAGTGGTAACCACCACACGAGTGCAGCACGCCTCGCCAGCCGGCACCTACGCCACACGGTGAACCG

165 S V G V V T T T R V Q H A S P A G T Y A H T V N R

1851 CAACTGGTACTCGGACGCCGACGTGCCTGCCTCGGCCGCCAGGAGGGGTGCCAGGACATCGCTACGCAGCTCA

189 N W Y S D A D V P A S A R Q E G C Q D I A T Q L

1925 TCTCCAACATGGACATTGATGTGATCCTGGGTGGAGGCCGAAAGTACATGTTTCGCATGGGAACCCAGACCCT

214 I S N M D I D V I L G G G R K Y M F R M G T P D P

1999 GAGTACCCAGATGACTACAGCCAAGGTGGGACCAGGCTGGACGGGAAGAATCTGGTGCAGGAATGGCTGGCGAA

239 E Y P D D Y S Q G G T R L D G K N L V Q E W L A K

2073 GCGCCAGGGTGCCCGGTATGTGTGGAACCGCACTGAGCTCATGCAGGCTTCCTGGACCCGTCTGTGACCCATC  
263▶ R Q G A R Y V W N R T E L M Q A S L D P S V T H  
2147 TCATGGGTCTCTTTGAGCCTGGAGACATGAAATACGAGATCCACCGAGACTCCACACTGGACCCCTCCTGATG  
288▶ L M G L F E P G D M K Y E I H R D S T L D P S L M

**SacII (2265)**

2221 GAGATGACAGAGGCTGCCCTGCGCCTGCTGAGCAGGAACCCCCGCGGCTTCTTCTCTTCGTGGAGGGTGGTGC  
313▶ E M T E A A L R L L S R N P R G F F L F V E G G R  
2295 CATCGACCACGGTCATCACGAAAGCAGGGCTTACCGGGCACTGACTGAGACGATCATGTTGACGACGCCATTG  
337▶ I D H G H H E S R A Y R A L T E T I M F D D A I  
2369 AGAGGGCGGGCCAGCTCACCAGCGAGGAGGACACGCTGAGCCTCGTCACTGCCGACCACTCCACGCTTCTCC  
362▶ E R A G Q L T S E E D T L S L V T A D H S H V F S  
2443 TTCGGAGGCTACCCCTGCGAGGGAGCTCCATCTTCGGGCTGGCCCCTGGCAAGGCCCGGACAGGAAGGCCTA  
387▶ F G G Y P L R G S S I F G L A P G K A R D R K A Y  
2517 CACGGTCTCTATACGAAACGGTCCAGGCTATGTGCTCAAGGACGGCGCCCGCGGATGTTACCGAGAGCG  
411▶ T V L L Y G N G P G Y V L K D G A R P D V T E S  
2591 AGAGCGGGAGCCCCGAGTATCGGCAGCAGTCAGCAGTGCCCTGGACGAAGAGACCCACGAGGCGAGGACGTG  
436▶ E S G S P E Y R Q Q S A V P L D E E T H A G E D V  
2665 GCGGTGTTGCGCGCGGCCCGCAGGCGCACCTGGTTCACGGCGTGCAGGAGCAGACCTTCATAGCGCACGTCAT  
461▶ A V F A R G P Q A H L V H G V Q E Q T F I A H V M  
2739 GGCCTTCGCCGCTGCCTGGAGCCCTACCCGCTGCGACCTGGCGCCCCCGCGGCACCACCGACGCCGCGC  
485▶ A F A A C L E P Y T A C D L A P P A G T T D A A

**NheI (2849)**

2813 ACCCGGGGCGGTCCCGTCCAAGCGTCTGGATTGAAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTT  
510▶ H P G R S R S K R L D •  
2887 TGGACAAACCACAACACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTG

**MfeI (2998)**

2961 TAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGGAG  
3035 GTGTGGGAGGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTAATTCTAAAATACAGCATAGC

3109 AAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGG  
3183 CTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAGATATAGTGTATTTTCCCA  
3257 AGGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAATAT  
3331 TCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGC  
3405 CCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAG  
3479 AAAGCGAGCTTCTAGCTTATCCTCAGTCCTGCTCCTGCCACAAAGTGCACGCAGTTGCCGGCCGGTTCGCGC

125▶ • D Q E E A V F H V C N G A P D R

3553 AGGGCGAACTCCCGCCCCACGGCTGCTCGCCGATCTCGGTTCATGGCCGGCCCGGAGGCGTCCCGGAAGTTCGT  
107▶ L A F E R G W P Q E G I E T M A P G S A D R F N T  
3627 GGACACGACCTCCGACCACTCGGCGTACAGCTCGTCCAGGCCGCGCACCCACACCCAGGCCAGGGTGTGTCCG  
83▶ S V V E S W E A Y L E D L G R V W V W A L T N D P

**SgrAI (3756)**

3701 GCACCACCTGGTCTGGACCGCGCTGATGAACAGGGTCACGTCGTCGCCGACCACACCCGGCGAAGTCGTCCTCC  
58▶ V V Q D Q V A S I F L T V D D R V V G A F D D E  
3775 ACGAAGTCCCGGGAGAACCCGAGCCGGTCCGGTCCAGAAGTCCGACCGCTCCGGCGACGTCGCGCGCGGTGAGCAC  
33▶ V F D R S F G L R D T W F E V A G A V D R A T L V

**MfeI (3919)**

3849 CGGAACGGCACTGGTCAACTTGGCCATGATGGCTCCTCCTGTGAGGAGAGGAAAGAGAAGAAGGTTAGTACAAT  
9▶ P V A S T L K A M  
3923 TGCTATAGTGAGTTGTATTATACTATGCAGATATACTATGCCAATGATTAATTGTCAAAGTAGGGCTGCAGGTT

3997 AATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCC

4071 ATAGGCTCCGCCCCCTGACGAGCATCAGAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTA

4145 TAAAGATACCAGGCGTTTTCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGCTTACCGGATA

4219 CCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCCGGTGT

4293 AGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCCGACCGCTGCGCCTTATCCGGTAAC

4367 TATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAG

4441 AGCGAGGTATGTAGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTAT  
4515 TTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACC  
4589 ACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCC  
4663 TTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTT  
4737 AATTAACATTTAAATCA