



EcoRI (23)

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

1 GCGGCCGCGTGCACGATATCTAGAATTCGGATCCTGCAGGGCCCACTAGTGCATAGATCGAGGCCCGGGTCA

75 AGGCCCCGCTCTCCTGGGCGGCCCTGCCAGGCGGGCCAGCCGCTCTCCCCGCACTCCCGGTTTCGCTCT

149 CACGGTCCCTGAGGTGGGCGGGCGGGCCCTGGATGACAGCGATAGAACCCCGGCCGACTCGCCCTCGCCCCG

223 CTCTGGGTCTGGGCTTCCCCAGCCTAGTTCACGCCTAGGAGCCGCTGAGCAGCCGCGGCCAGGCCACACG

Eco47III (338)

297 CCACGAGCCCTCCCCGCTGGGCGTCCCCGGATCCCCGAGCGCTCGGGCTCCCGGCTTGAACACAGGGAGGAG

371 GGAGGGAGCGAGGGAGCAACCAGCTGCGACCCGAAATGCCATATAAGGAGCAGGAAGGATCCCCCGCCGAAC

445 AACCTTATTTGGGCAGCACCTTATTTGGAGTGGCCGATATGGCCGCGCTTCCGGCTCTGGGAGGAGGGA

BspEI (548)

519 AGAAGGCGGAGGGAGGGGCAACGCGGGAACCTCCGAGCTGCGCGGGTCCCGAGGCCCGGGCGGGCTAGAGC

593 TCTAGGCTTCCCCGAAGCCTGGGCGCCTGGGATGCGGGCGGGCGGGCCCTAGGGTGCAGGATGGAGGTGC

667 CGGGCGCTGTCGGATGGGGGGCTTACGTCCTCCGGTCTCCCGGCCGGTCTGCCATATTAGGGCTTCTCTG

741 CTCCCATATATGGCCATGTACGTACGACGGAGGCGGACCCGTGCCGTTCCAGACCTTCAAATAGAGGCGGA

NruI (826)

815 TCCGGGAGTCGCGAGAGATCCAGCGCGCAGAATTGGGAGCCGCCGCCATCCGCCGCCGAGCCAGCT

SacII (932)

889 TCCGCCGCCGAGGACCGGCCCTGCCAGCCTCCGAGCCGCGGCGGTCCACGCCCGCCGCGCCAGGGC

963 GAGTCGGGGTCGCCGCTGCACGCTTCTCAGTGTTCGCCGCGCCCGCATGTAACCCGGCCAGGCCCGCAAC

NcoI (1109)

1037 TGTGTCCCCTGCAGCTCCAGCCCCGGGCTGCACCCCCGCCCGACACCAGCTCTCCAGCCTGCTCGTCCA

1111 ATGGAAATCAAGGTGCTGTTTGCCTCATCTGTATTGCTGTTGCTGAGGCAAAACCACTGAAATCAATGAAGA
1 M E I K V L F A L I C I A V A E A K P T E I N E D

BglII (1224)

1185 CCTCAATATAGCTGCTGTGGCCTCCAACCTTTGCCACCACAGATCTTGAGACTGACCTGTTACCAACTGGGAGA
25 L N I A A V A S N F A T T D L E T D L F T N W E

1259 CCATGAATGTGATTAGCACTGACACAGAGCAGGTGAACACAGATGCTGACAGGGCAAGCTGCCTGGCAAAAAA
50 T M N V I S T D T E Q V N T D A D R G K L P G K K

1333 CTCCCCCAGATGCTCTGAGGGAGCTGGAGGCCAATGCCAGAAGGGCTGGTTGCACAAGAGGCTGCCTCATTTG
75 L P P D V L R E L E A N A R R A G C T R G C L I C

1407 CCTCTCCACATTAAGTGCACCCCTAAGATGAAGAAATTTATCCCTGGCAGGTGCCACACTTATGAAGGTGAAA
99 L S H I K C T P K M K K F I P G R C H T Y E G E

1481 AGGAGTCTGCTCAGGGAGGGATTGGAGAGGCAATTGTTGATATCCAGAGATTCTGGCTTCAAGGATAAGGAG
124 K E S A Q G G I G E A I V D I P E I P G F K D K E

1555 CCACTGGACCAGTTTATTGCTCAAGTGGACCTCTGTGCTGATTGCACCACTGGCTGTCTGAAGGGCCTTGCCAA
149 P L D Q F I A Q V D L C A D C T T G C L K G L A N

1629 TGTCCAGTGTCTGACCTCCTGAAGAAGTGGCTTCCCCAGAGGTGTACCACTTTTGCCAGCAAGATTACGGGTA
173 V Q C S D L L K K W L P Q R C T T F A S K I Q G

NheI (1743)

1703 GGGTGGACAAAATCAAGGGTCTGGCTGGGGACAGATGATAGCTAGCTGGCCAGACATGATAAGATACATTGATG
198 R V D K I K G L A G D R

1777 AGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTA

1851 TTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGG

1925 GGAGGTGTGGGAGGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTAATTCTAAAATACAGCA

1999 TAGCAAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCA
2073 GGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGATTTTT

SspI

2147 CCCAAGGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCCACATTCCCTTTTTAGTAAA
2221 ATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCA
2295 AGGCCCTTCATAATATCCCCAGTTTGTAGTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAG
2369 CAAGAAAGCGAGCTTCTAGCTTATCCTCAGTCCTGCTCCTCTGCCACAAAGTGCACGCAGTTGCCGGCCGGGTC

125↓ • D Q E E A V F H V C N G A P D

2443 GCGCAGGGCGAACTCCCGCCCCACGGCTGCTCGCCGATCTCGGTCATGGCCGGCCGGAGGCGTCCCGAAGT
109↓ R L A F E R G W P Q E G I E T M A P G S A D R F N
2517 TCGTGGACACGACCTCCGACCACTCGGCGTACAGCTCGTCCAGGCCGCGCACCCACACCCAGGCCAGGGTGTG
84↓ T S V V E S W E A Y L E D L G R V W V W A L T N

SgrAI (2650)

2591 TCCGGCACACCTGGTCCTGGACCGCGCTGATGAACAGGGTCACGTGTCCTCCGGACCACACCCGGCGAAGTCGTC
59↓ D P V V Q D Q V A S I F L T V D D R V V G A F D D
2665 CTCCACGAAGTCCCGGGAGAACCCGAGCCGGTCCGTCAGAACTCGACCGCTCCGGCGACGTGCGCGCGGTGA
35↓ E V F D R S F G L R D T W F E V A G A V D R A T L
2739 GCACCGGAACGGCACTGGTCAACTTGGCCATGATGGCTCCTCCTGTGTCAGGAGAGAAAGAGAAGAAGGTTAGTA
10↓ V P V A S T L K A M ←

2813 CAATTGCTATAGTGAGTTGTATTATACTATGCAGATATACTATGCCAATGATTAATTGTCAAACTAGGGCTGCA

2887 GGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTT

2961 TTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGG

3035 ACTATAAAGATACCAGGCGTTTTCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCG

3109 GATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCCG

3183 GTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTGAGCCCGACCGCTGCGCCTTATCCGG

3257 TAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATGCCACTGGCAGCAGCCACTGGTAACAGGATTA

3331 GCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACA

3405 GTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACA

3479 AACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAG

3553 ATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTTGGTCATGGCT

3627 AGTTAATTAACATTTAAATCA