



**EcoRI (23)**

*NotI* (2)

**XbaI (19)**

**SdaI (38)**

**SpeI (45)**

1 GCGGCCGCGTCGACGATATCTAGAATTCGGATCCTGCAGGGCCCACTAGTTCCATGTCCTTATATGGACTCATC  
75 TTTGCTATTGCGACACACTCAATGAACACCTACTACGCGCTGCAAAGAGCCCCGAGGCCTGAGGTGCCCC  
149 CACCTCACCCTCTTCTATTTTTGTGTAAAAATCCAGCTTCTTGTCAACCCTCCAAGGAGGGGAGGAGGAG  
223 GAAGGCAGTTCTCTAGGCTGAGCCGAATGCCCTCTGTGGTCCCACGCCACTGATCGCTGCATGCCACCAC  
297 CTGGGTACACACAGTCTGTGATTCGCGAGCAGAACGGACCCTGCCACCCGGTCTTGTGTGCTACTCAGTGGA  
371 CAGACCCAAGGCAAGAAAGGGTGACAAGGACAGGGTCTTCCCAGGCTGGCTTTGAGTTCCTAGCACCGCCCCG  
445 CCCAATCCTCTGTGGCACATGGAGTCTTGGTCCCAGAGTCCCCAGCGCCTCCAGATGGTCTGGGAGGGCA  
519 GTTCAGCTGTGGCTGCGCATAGCAGACATAACAACGGACGGTGGGCCAGACCCAGGCTGTGTAGACCCAGCCCC  
593 CCGCCCCGAGTGCCTAGGTCACCCACTAACGCCCCAGGCCTGGTCTTGGCTGGGCGTACTGTTACCCCTCAA  
667 AAGCAGGCAGCTCCAGGGTAAAAGGTGCCCTGCCCTGTAGAGCCACCTTCTTCCCAGGGCTGCGGCTGGGTA  
741 GGTGTAGCCTTCATCACGGGCCACCTCCAGCCACTGGACCGCTGGCCCCTGCCCTGTCTGGGGAGTGTGGT  
815 CCTGCGACTTCTAAGTGGCCGAAGCCACCTGACTCCCCAACACCACACTCTACCTCTCAAGCCCAGGTCTCT

**NheI (915)**

889 CCCTAGTGACCCACCCAGCACATTTAGCTAGCTGAGCCCCACAGCCAGAGGTCCTCAGGCCCTGCTTTCAGGGC  
963 AGTTGCTCTGAAGTCGGCAAGGGGGAGTACTGCCTGGCCACTCCATGCCCTCCAAGAGCTCCTTCTGCAGGAG  
1037 CGTACAGAACCCAGGGCCCTGGCACCCGTGCAGACCCTGGCCACCCACCTGGGCGCTCAGTGCCCAAGAGAT  
1111 GTCCACACCTAGGATGTCCCGCGGTGGGTGGGGGGCCCCGAGAGACGGGCAGGCCGGGGCAGGCCTGGCCATGC  
1185 GGGGCCGAACCGGCCTGCCCAGCGTGGGGCGCGGGGGCCACGGCGCGGCCCCAGCCCCGGGCCAGCAC  
1259 CCAAGGCGGCCAACGCCAAAACCTCTCCCTCCTCCTTCTCAATCTCGCTCTCGCTCTTTTTTTTTTCGCA  
1333 AAAGGAGGGGAGAGGGGTAAAAAATGCTGCACTGTGCGGCGAAGCCGGTGAGTGAGCGGCGGGGGCCAATC

*NotI* (1446)

**XhoI (1440)**

1407 AGCGTGCGCCGTTCCGAAAGTTGCCTTTTATGGCTCGAGCGGCCGCGGGCGGCCCTATAAAACCCAGCGGCGC  
1481 GACGCGCCACCACCGCCGAGACCGCTCCGCCCGCGAGCACAGAGCCTCGCCTTTGCCGATCCGCCGCCGTC

*NotI* (1620)

1555 CACACCCGCGCCAGgtaagcccggccagccgaccggggcaggcggctcacggcccggccgaggcggccgagg  
1629 ccccttcgcccgtgcagagccgcccgtctgggcccagcggggggcgcaggggggggaaaccggaccgcccgtggg  
1703 gggcgcgggagaagcccctgggcctccggagatgggggacacccacgcccagttcggaggcgcgaggccgct  
1777 cgggaggcgcgctccgggggtgccgctctcggggcgggggcaaccggcggggtctttgtctgagccgggctctt  
1851 gccaatggggatcgagggtgggcccggcggagccccgccaggccgggtgggggctggggcgcattgcccgt  
1925 gcgctggtcctttgggcccgaactgctgctgcccgtgggaattggcgcctaattgcccgtgcccgtgggactc  
1999 aaggcgcctaactgcccgtgcttctggggcccggggtgccgcccctgggctggggcgaaggcgggctcggccg

2073 gaaggggtggggctgccgcggctcccgggcgcttgcgcgcaacttctgcccagaccgctggccgcccaggggtg  
2147 tggccgctgctgctgcgcgcgccgaccggcgctgtttgaaccgggaggagggggctggcgcccgggtggga  
2221 gggggttggggcctggcttctgcccgcgcccggggacgcctccgaccagtgtttgccttttatggtaataa  
2295 cgcgccggccccggcttctttgtccccaatctggggcgcgccggcgccccctggcggcctaaggactcggcg  
2369 cgccggaagtggccagggcgggggcgacctcggtcacagcgccccggctatttctcgagCTACCATGGAAA  
2443 TCAAGGTGCTGTTTGCCTCATCTGTATTGCTGTTGCTGAGGCAAAACCCACTGAAATCAATGAAGACCTCAAT  
3>I K V L F A L I C I A V A E A K P T E I N E D L N  
2517 ATAGCTGCTGTGGCCTCCAACCTTGGCCACCACAGATCTTGAGACTGACCTGTTACCAACTGGGAGACCATGAA  
28I A A V A S N F A T T D L E T D L F T N W E T M N  
2591 TGTGATTAGCACTGACACAGAGCAGGTGAACACAGATGCTGACAGGGGCAAGCTGCCTGGCAAAAACTCCCC  
52I V I S T D T E Q V N T D A D R G K L P G K K L P  
2665 CAGATGTCCTGAGGGAGCTGGAGGCCAATGCCAGAAGGGCTGTTGCACAAGAGGCTGCCTCATTGCTCTCC  
77I P D V L R E L E A N A R R A G C T R G C L I C L S  
2739 CACATTAAGTGCACCCCTAAGATGAAGAAATTTATCCCTGGCAGGTGCCACACTTATGAAGGTGAAAAGGAGTC  
102I H I K C T P K M K K F I P G R C H T Y E G E K E S  
2813 TGCTCAGGGAGGGATTGGAGAGGCAATTGTTGATATCCAGAGATTCTGGCTTCAAGGATAAGGAGCCACTGG  
126I A Q G G I G E A I V D I P E I P G F K D K E P L  
2887 ACCAGTTTATTGCTCAAGTGGACCTCTGTGCTGATTGCACCACTGGCTGTCTGAAGGGCCTTGCCAATGTCCAG  
151I D Q F I A Q V D L C A D C T T G C L K G L A N V Q  
2961 TGCTCTGACCTCCTGAAGAAGTGGCTTCCCAGAGGTGTACCACTTTTCCAGCAAGATTGAGGGTAGGGTGA  
176I C S D L L K K W L P Q R C T T F A S K I Q G R V D  
3035 CAAAATCAAGGGTCTGGCTGGGGACAGATGATAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGG  
200I K I K G L A G D R •  
3109 ACAAACCACAACCTAGAATGCAGTGAAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAA  
3183 CCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTTATGTTTTCAGGTTTCAGGGGGAGGTG  
3257 TGGGAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTAATTCTAAAATACAGCATAGCAAA  
3331 ACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTG  
3405 TTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGG  
3479 TTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCCACATTCCCTTTTTAGTAAAAATATTCA  
3553 GAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCT  
3627 TCATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAA  
3701 GCGAGCTTCTAGCTTATCCTCAGTCTGCTCTCTGCCACAAAGTGCACGCGAGTTGCCGGCCGGGTCCGCGCAGG  
125I • D Q E E A V F H V C N G A P D R L  
3775 GCGAACTCCC GCCCCACGGCTGCTCGCCGATCTCGGTCATGGCCGGCCCGGAGGCGTCCCGGAAGTTCGTGGA  
106I A F E R G W P Q E G I E T M A P G S A D R F N T S  
3849 CACGACCTCCGACCACTCGGCGTACAGCTCGTCCAGGCCGCGCACCCACACCCAGGCCAGGGTGTGTCGGCA  
82I V V E S W E A Y L E D L G R V W V W A L T N D P V  
3923 CCACCTGGTCTGGACCGCGCTGATGAACAGGGTCACGTCGTCCCGGACCACACCGGCGAAGTCGTCTCCACG  
57I V Q D Q V A S I F L T V D D R V V G A F D D E V  
3997 AAGTCCCGGAGAACCCGAGCCGGTCCGAGTCCGAGTCCGAGTCCGAGTCCGAGTCCGAGTCCGAGTCCGAGTCCGAG  
32I F D R S F G L R D T W F E V A G A V D R A T L V P  
4071 AACGGCACTGGTCAACTTGGCCATGATGGCTCCTCCTGTGTCAGGAGAGGAAAGAGAAGAAGGTTAGTACAATTGC  
8I V A S T L K A M  
4145 TATAGTGAGTTGTATTATACTATGCAGATATACTATGCCAATGATTAATTGTCAA  
4219 TAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATA  
4293 GGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAA

4367 AGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCT  
4441 GTCCGCCTTTCTCCCTTCGGGAAGCGTGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGG  
4515 TCGTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTGCGCCTTATCCGGTAACTAT  
4589 CGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGC  
4663 GAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTG  
4737 GTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACC  
4811 GCTGGTAGCGGTGGTTTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTT  
4885 GATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAAT  
4959 TAACATTTAAATCA