



EcoRI (19)  
NotI (2) XbaI (15) SdaI (29) SpeI (36)  
1 CCGGCCGCTATGCATCTAGAATTCCTGCAGGGCCACTAGTCTGCAAGCAGACCTGGCAGCATTGGCTGGCCGCCCCAGGGCTCTCTTCATGCC

101 AGTGAATGACTCACCTTGGCAGACACAATGTTCCGGGTGGGCACAGTGCCTGTTCCCGCCGACCCAGCCCCCTCAATGCCTTCCGAGAAGCC

201 ATTGAGTAGGGGCTTGATTGACCCAGCCTGACAGCCTGGCATCTTGGGATAAAAAGCAGCAGACGCCCTAGGGGCTGCCTTGCTGTGTGGCGCCA  
AvrII (271) SgrAI (300)

301 CCGCGGTGGAGAACAAGGCTCTATTAGCCTGTGCCAGGAAAGGGATCAGGGGATGCCAGGCATGGACAGTGGTGGCAGGGGGGAGAGGGGC

401 TGTCTGCTTCCAGAAGTCCAAGGACACAATGGTGAGGGGACTGGCAGGGTCTGACCTGTGGACCAGAGTGGAGGGCTAGATGGACCTGAAGT

501 CTCCAGGGACAACAGGGCCAGGCTCAGGCTCTAGTGGGCCAGTGGCTCCAGGTTTCAAACCATCCATCCAGAGGTTCTTCCATCTCTCC

XhoI (618)  
601 AGGCTGATGTGTGGAACTCGAGGAAATAATCTCCAGTGGGAGACGGAGGGTGGCCAGGAAACGGGGCTGCAGGAATAAAGACGAGCCAGCACAG

701 CCAGCTCATGCGTAACGGCTTGTGGAGCTGTCAAGCCCTGGTCTCTGGGAGAGAGGCACAGGGAGGCCAGACAAGGAAGGGGTGACCTGGAGGGACAGA

801 TCCAGGGCTAAAGTCTGATAAGGCAAGAGAGTCCCGCCCTCTTGCCTATCAGGACCTCCACTGCCACATAGAGGCCATGATTGACCTTAGACA

901 AAGGGTGGTGTCCAATCCAGCCCCAGCCCCAGAAGTCCAGGGAATGAATGGGCAGAGAGCAGGAATGTGGACATCTGTGTTCAAGGGAAGGACTCC

1001 AGGAGTCTGCTGGGAATGAGGCTAGTAGGAAATGAGTGGCCCTTGGGGTACAGAACAGGTTTATTCTCCCAAATCCAGCACCTTGCAGGCACT

1101 TACAGCTGAGTGAGATAATGCCTGGTATGAAATCAAAAAGTGGAAAGCAGGTCAGAGGTCATCTGGTACAGCCCTCCTTCCCTTTTTTTTTTTTT

1201 TTTTTTGTGAGACAAGGCTCTCTCTGTTGCCAGGCTGGAGTGGCGAAACACAGCTACTGCAGCCTCAACCTACTGGGCTCAAGCAATCTCCAG

1301 CCTCAGCTCCCAAAGTGTGGGATTACAAGCATGACCCACCCACTCAGCCCTTCTCTCTTTTAAATTGATGCATAATAATTGTAAGTATTCATCAT

1401 GGTCAAACCAACCTTTCTTGACCCACCTTCTAGAGAGAGGTCCTTGTATTGACGGTCAGGGCCCCAGACCCATGGTCTGGCTCCAGGTACCACCT  
NeoI (1475) Acc65I (1491)

1501 GCCTCATGCAGGAGTGGCGTCCAGGAAGCTGCTCTGGGCACAGTACCTCAGTGGGTGAGGGAGCTCCTCCATAGCTGGGCTCGGCCCAA

1601 CCCACCCCTCAGGCTATGCCAGGGGTGTGCCAGGGGACCCGGGCATGCCAGTCTAGCCACTCCTCATAAAGCCCTCGCATCCAGGAGCGAG

BspHI (1714)  
1701 CAGAGCCAGAGCATCATGATGAAATCAAGGTGCTGTTGCCCTCATCTGTATTGCTGTTGCTGAGGCAAAACCCACTGAAATCAATGAAGACCTCAATA  
M 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 L N

BglIII (1832)  
1801 TAGCTGCTGTGGCCTCAACTTTGCCACCACAGATCTTGAGACTGACCTGTTCAACCACTGGGAGACCATGAATGTGATTAGCACTGACACAGAGCAGGT  
29 I A V A S N F A T T D L E T D L F T N W E T M N V I S T D T E Q V  
1901 GAACACAGATGCTGACAGGGCAAGCTGCCTGGCAAAAACCTCCCCAGATGCTCCTGAGGAGCTGGAGGCCAATGCCAGAAGGGCTGGTGCQAAGA  
62 N T D A D R G K L P G K K L P P D V L R E L E A N A R R A G C T R  
2001 GGCTGCTCATTGCTCTCCACATTAAGTGCACCCCTAAGATGAAGAAATTTATCCTGGCAGGTGCCACACTTATGAAGGTGAAAAGGAGTCTGCTC  
96 G C L I C L S H I K C T P K K F I P G R C H T Y E G E K E S A

EcoRV (2129)  
2101 AGGGAGGATTGGAGGCAATGTTGATATCCAGAGATCTTGCTGGCTCAAGGATAAGGAGCCACTGGACAGTATTATGCTCAAGTGGACCTCTGTGC  
129 Q G G I G E A I V D I P E I P G F K D K E P L D Q F I A Q V D L C A  
2201 TGATTGACCACTGGCTGTCTGAAGGGCTTGCATATGTCAGTCTGACCTCCTGAAGAAGTGGCTTCCCAGAGGTGTACCCTTTTCCAGCAAG  
162 D C T T G C L K G L A N V Q C S D L L K K W L P Q R C T T F A S K

NheI (2351)  
2301 ATTCAGGGTAGGGTGGACAAAATCAAGGGTCTGGCTGGGACAGATGATAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCC  
196 I Q G R V D K I K G L A G D R •  
2401 AACTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACA  
2501 AATTGCATTATTTATGTTTCAGGTTGAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTTCAAAATGTGGTATGGAATTAATCTAAAAT

2601 ACAGCATAGCAAACTTAACTCCAATCAAGCCTTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCA  
2701 TTAGCTGTTGACGCTCACCTTCTTTCATGGAGTTAAGATATAGTATTTTCCCAAGGTTGAACTAGCTCTTCATTTCTTATGTTTTAAATGCAC

SspI (2830)  
2801 TGACCTCCACATTCCTTTTTAGTAAAATATTGAGAAATAATTAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAAATCCAGATGCT  
2901 CAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGGACTTAGGAAACAAAGAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTAT  
3001 CCTCAGTCTGCTCCTTGCACAAAGTGCACGAGTTGCCGGCCGGTTCGCGCAGGGCGAACTCCCGCCCGGCTGCTCGCCGATCTCGGTATGG  
125 • D Q E E A V F H V C N G A P D R L A F E R G W P Q E G I E T M A  
3101 CCGGCCGAGGGCTCCCGAAGTTCGTGGACAGACCTCCGACCCTCGGCGTACAGCTCGTCCAGGCCGCGCACCCACCCAGGCCAGGGTGTGTGC  
92 P G S A D R F N T S V V E S W E A Y L E D L G R V W V W A L T N D

SgrAI (3258)  
3201 CGGACCCACCTGGTCTGGACGCGCTGATGAACAGGGTACGTCGTCGCCGACACACCCGGCGAAGTCTGCTCCACGAAGTCCCGGAGAACCCGAGC  
59 P V V Q D Q V A S I F L T V D D R V V G A F D D E V F D R S F G L  
3301 CGGTCGGTCCAGAACTCGACCGCTCCGGCGACGTCGCGCGCGGTGAGCACCAGGACGGCACTGGTCAACTTGGCCATGATGGCTCCTCTGTGAGGAG  
25 R D T W F E V A G A V D R A T L V P V A S T L K A M  
3401 GAAAGAGAAGAAGTTAGTACAATTGCTATAGTGTGATTATATCTATGACAGATACTATGCCAATGATTAATTGTCAAAGTGGGCTCGAGGTTAA  
3501 TTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGAACCGTAAAGGCCGCTTGGCTGTTTCCATAGGCTCCGCCCCCTGACGAGCATCA  
3601 CAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACAGGCGTTTTCCCTGGAAGCTCCTCGTGCCTCTCTGTTCCG  
3701 ACCCTGCGCTTACCGGATCCTGTCCTTCTCCCTCGGGAAGCGTGGCGCTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTGC  
3801 TTCGCTCAAAGTGGGCTGTGTGCAGAACCCCGCTCAGCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGTAGTCCAAACCCGGTAAGACAGCA  
3901 CTTATCGCCACTGGCAGCAGCCTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTAC  
4001 ACTAGAAGAACAGTATTTGGTATCTGCGCTGCTGTAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGTATCCGGCAAAACAAACCCGCTGGTA

4101 GCGGTGGTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAA

4201 CGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCA