



125

**EcoRI (23)**

**NotI (2)**                      **XbaI (19)**                      **SdaI (38)**                      **EcoNI (90)**

1 CGCGCCGCTCGACGATATCTAGAAATTCGGATCCTGCAGGGCCACTAGTGGAGCCGAGAGTAATTCATACAAAAGGAGGGATCGCCTTCGAAGGGGAG

101 AGCCCAAGGACCTCCATAAATTCACAGACCCAAATCCCTGTAGCCGCCACGACAGCGGAGGAGCATGCGCCAGGGCTGAGCGGGGTAGATCA

201 GAGCACACAAGCTCACAGTCCCCGGCGGTGGGGGAGGGGCGCTGAGCGGGGCCAGGGAGCTGGCGGGGCAAACTGGGAAAGTGGTGTCTGTGC

301 TGGTCCGCCCTCTTCCCAGGGTGGGGGAGAACGGTATATAAGTGGGTAGTCGCCTTGACGTTCTTTTCGCAACGGGTTTGCCGTCAGAACGACGAG

**SacII (423)**

401 tgatggcgggtgtggtcttcgcgggccccggagctggagccctgctctgagcgggctgatatgcgagtgctcgcgaggggttagctgtgagc

501 attccaccttcgagtgccggcggtgccccgggtgagagtgagcggcctagcggcaaccccgtagcctcgctcggccttgaggccttagcgtggtg

601 tccgcgcgcgctgcccactccggcgcactatgcttttttctcttctgctccctcgattgccttcagcagcatgggctaacaaggagggtgtgggg

**HindIII (722)**

701 ctcactcttaaggagccatgaagcttacgttggataggaatggaagggcaggagggcgactggggcccgcccgcttcggagcacatgtccgacgcca

801 cctggatggggcgagccctgtggctttccgaagaacatcggcgctgagtttagctacctggccatgtggccctagcactgggcacggctgtgctggcg

901 gtgccgcttccttgcctcccaacaagggtgagggcctcccgccggcaccagttgcttgccggaagatggcgcgtcccgggccctgttgcaagga

1001 gctcaaaatggagcgcggcagcccgggtggagcggggggtgagtcaccacacaaaggaagaggccttgcctccggcgctgtctctgtgac

1101 cccgtggtctatcggccgcatagtcacctcggccttctctttagcaccgctcgtcgcggggggggaggggatctaattggcgttgagttgttcacatt

1201 tggtgggtggagactagtcaggccagcctggcgtggaagtcattcttgaatttggcccttgagttggagcagggtaattctcaagcctcttagcg

**NcoI (1364)**

1301 gttcaaaaggtatttttcaaacccgtttccagGTGTTGTGAAAGCCACCCTAAATCAAAGCAAccATGGTTCGGGGCCCTGCATGCTGCTGCTGCTGCT

1401 GCTGCTGGGCTGAGGCTACAGCTCTCCCTGGGCATCATCCAGTTGAGGAGGAGAACCAGGACTTCTGGAACCCGAGGGCAGCCGAGGCCCTGGGTGCC

1501 GCCAAGAAGTGCAGCCTGCACAGACAGCCGCAAGAACCTCATCATCTTCTGGCGATGGGATGGGGGTGTCTACGGTGACAGCTGCCAGGATCTATA

1601 AAGGGCAGAAGAAGGACAACTGGGGCCTGAGATACCCCTGGCTATGGACCGTTCCTCATATGTGGCTCTGTCCAAGACATACAATGTAGACAAACATGT

1701 GCCAGACAGTGGAGCCACAGCCAGCCCTACCTGTGCGGGTCAAGGGCAACTTCCAGACATTGGCTTGAGTGACGCCGCCCTTTAACAGTGCACAC

1801 ACGACACCGCCCAACGAGGTATCTCCGTGATGAATCGGGCAAGAAGCAGGGAAGTCAGTGGGAGTGGTAACCCACACGAGTGCAGCAGCCCTCGC

1901 CAGCCGCCACTACGCCACACCGTGAACCGCAACTGGTACTCGGACGCCAGCTGCCTGCCTCGGCCGCCAGGAGGGTGCCAGGACATCGTACGCA

2001 GCTCATCTCAACATGGACATTGATGTATCCTGGTGGAGGCCGAAAGTACATGTTTCGCATGGGAACCCAGACCCCTGAGTACCCAGATGACTACAGC

2101 CAAGGTGGGACAGGCTGGACGGGAAGAATCTGGTGCAGGAATGGTGGCAGGCGCCAGGGTGCCTGATGTGTGGAACCCGACTGAGCTCATGCAGG

2201 CTTCCCTGGACCCGTCTGTGACCCATCTCATGGGTCTCTTTGAGCCTGGAGACATGAAATACGAGATCCACCAGACTCCACACTGGACCCCTCCCTGAT

2301 GGAGATGACAGAGGCTGCCCTGCGCTGCTGAGCAGGAACCCCGCGCTTCTCTCTCGTGGAGGGTGGTGCATCGACCAGGTGCATCAGCAAAAGC

2401 AGGGCTTACCGGGCACTGACTGAGACGATCATGTTGCGAGCGCCATTGAGAGGGCGGGCCAGCTCACCAGCGAGGAGGACAGCTGAGCCTGCTCACTG

2501 CCGACCCTCCACGCTTCTCTCTCGAGGCTACCCCTGCGAGGAGCTCCATCTTCGGGCTGGCCCTGGCAAGCCCGGGACAGGAAAGCCCTACAC

2601 GGTCTCTATACGGAACCGTCCAGGCTATGTCTCAAGGACGGCGCCCGCCGGATGTTACGAGAGCGAGAGCGGGAGCCCGAGTATCGGCAGCAG

2701 TCAGCAGTGCCTGACGAAGAGACCCAGCGAGGACGTGGCGGTGTCGCGCGCGCCCGCAGGCGCACCTGGTTCACGGCGTGCAGGAGCAGA

2801 CCTTCATAGCGACGTCATGGCTTCGCGCGCTGCCTGGAGCCCTACACCGCTGCGACCTGGCGCCCCCGCCGACACCCAGCCCGCGCACCCGGG

2901 GCGGTCCCGTCCAAGCGTCTGGATTGAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAA

**SacII (2346)**

3001 ATGCTTTATTTGTGAAATTTGTGATGCTATGCTTTATTTGTAACATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTATGTTT

3101 CAGTTTCAGGGGAGGTGTGGGAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAAATTAATTCTAAAATACAGCATAGCAAACTTTAAC

3201 CTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCAC

3301 TTCTTTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTCTCTTCTTTATGTTTTAAATGCAGTACCTCCACATTCCTTTT

3401 TAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATAGGCAGAAATCCAGATGCTCAAGGCCCTTCATAATATCCC

3501 CCAGTTTGTAGTTGGACTTAGGGAACAAGGAACCTTAATAGAATTTGGACAGCAAGAAGCGAGCTTCTAGCTTATCTCAGTCTGCTCTCTGCG

**NheI (2930)**

512 yArgSe rArgSe rLysArgLeuAsp●●●

**MfeI (3079)**

125 ●●●AspG InG LuG LuA lAv

3601 ACAAAGTGCACGCAGTTGCCGGCCGGTTCGCGCAGGGCGAACTCCCGCCCCACGGCTGCTCGCCGATCTCGGTATGGCCGGCCGGAGGGCTCCCGGA  
118 a lPheH isVa lCysAsnG lYA laP roAspArgLeuA laPheG luArgG lyT rpP roG lnG luG ly l leG luTh rMe tA laP roG lySe rA laAspA rgPh  
3701 AGTTCGTGGACACGACTCCGACCCTCGGCGTACAGCTCGTCCAGGCCGCGCACCCACCCAGGCCAGGGTGTGTCCGGCACCACCTGGTCTGGAC  
85 eAsnTh rSe rVa Na lG luSe rT rpG luA laTy rLeuG luAspLeuG lYArgVa lT rpVa lT rpA laLeuTh rAsnAspP roVa Ma lG lnAspG lnVa l  
**SgrAI (3837)**  
3801 CGCGCTGATGAACAGGGTCACGTCGTCGCCGACCACCCGGCGAAGTCGTCTCCACGAAGTCCCGGAGAACCCGAGCCGGTCCGAGAACTCGACC  
52 A laSe r l lePheLeuTh rVa lAspAspArgVa Ma lG lYA laPheAspAspG luVa lPheAspArgSe rPheG lyLeuArgAspTh rT rpPheG luVa lA  
MfeI  
3901 GCTCCGGCGACGTCGCGCGCGGTGAGCACCGGAACGGCACTGGTCAACTTGCCATGATGGCTCCTCCTGTCAGGAGGAAAGAGAAGAAGTTAGTAC  
18 laG lYA laVa lAspArgA laTh rLeuVa lP roVa lA laSe rTh rLeuLysA laMe t  
4001 AATTGCTATAGTGAGTTGATTATACTATGCAGATATACTATGCCAATGATTAATTGTCAAACTAGGGCTGCAGGTTAATTAAGAACATGTGAGCAAAG  
4101 GCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCA  
4201 GAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGCGTTTCCCTCGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCCTTACC GGATAC  
4301 CTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGTTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGGTAGGTGTTCTGCTCCAAGCTGGGCTGTG  
4401 TGCACGAACCCCGTTAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGTAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGC  
4501 CACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGT  
4601 ATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGATTGGTAGCTCTTGATCCGGCAAACAAACCACCCTGGTAGCGGTGTTTTTTTGTGTTGCA  
4701 AGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGAT  
4801 TTTGGTCATGGCTAGTTAATTAACATTTAAATCA