



125

EcoRI (23)

NotI (2) **XbaI (19)** **EcoRV (17)** **SdaI (38)** **SpeI (45)**

1 **GCGGCCGCGTCGACGATATCTAGAATTCGGATCCTGCAGGGCCCACTAGTAGCTCTGAGCTCCTCTCTGCTCGCCCAATCCTTCCAACCCCTATGGTG**
101 **GTATGGCTGACACAGAAAATGTCTGCTCCTGTATGGGACATTTGCCCTCTTCTCCAATATAAGACAGGATGAGGCTAGCTTTTGTCTGCTCCAAAGTT**
201 **TTAAAAGAACACATTGCACGGCATTAGGGACTCTAAAGGTGGAGGAGGAATGAGGGAATTGCATCATGCCAAGGCTGGTCTCATCCATCACTGCTTC**
301 **CAGGGCCAGAGTGGCTTCCAGGAAGTATTCTTACAAAGGAAGCCGATCTGTAGCTAACACTCAGAGCCATTTTCTGCGTTAACCCCTCCGACCTC**
401 **ATATACAGGAGTAACATGATCAGTGACCTGGGGAGCTGGCCAACTGCGGGACCTGCCAAGCTGAGGGCCTTGGTGTCTGGACAACCCCTGTGCCG**

ScaI (566)

501 **ATGAGACTGACTACGCCAGGAGCCCTGGTGCAGATGGCACACCTAGAGCGCTAGACAAAGTACTATGAGGACGAGGACCGGGCAGAAGCTGAGGA**
601 **GATCCGACAGAGGCTGAAGGAGGAACAGGAGCAAGAACTCGACCCGGACCAAGACATGGAACCGTACCTCCCGCCAAGTCTAGTGGCTCCTCTAGCCCTGCA**
701 **GGGACAGTAAAGGTGATGGCAGGAAGCAGCCCCGGAGGTCAAAGGCTGGGCACCGGGAGGAGGCCAGAGTCAGAGGCTGCGGGTATCTCAGATAT**
801 **GAAGGAAAGATGAGAGAGGCTCAGGAAGAGTAAGAAAAGACACAAGAGACCAGAGAAGGGAGAAGAATTAGAGAGGGAGGCAGAGGACCGCTGTCTCTA**
901 **CAGACATAGCTGGTAGACTGGGAGGAAGGGATGAACCTGAGCGCATGAAGGGAAGGAGGTGGCTGGTGGTATATGGAGGATGTAGCTGGCCAGGGA**
1001 **AAAGATCTGCACTAAAAATCTGAAGCTAAAAATAACAGGACACGGGGTGGAGAGGCCAAAGGAGGGCAGAGTGAGGCAGAGAGACTGAGAGGCCTGGGG**
1101 **ATGTGGGCATTCCGGTAGGGCACACAGTTCACTTGTCTTCTTTTTCCAGGAGGCCAAAGATGCTGACGTCAGAAGTCTATAATACCCAGTGGGGACC**
1201 **ACCGCATTATAGCCCTGTTACAAGAAGTGGGAGATGTTCTTTTTGTCCAGACTGGAATCCGTTACATCCCAGGCTCAGGTTCTGTGGTGGTCACT**
1301 **TCTGTGTGGCTTGTCTGTGGCCCTACCTAAAGTCTAAGCACAGCTCTCAAGCAGATCCGAGGCGACTAAGATGCTAGTAGGGTGTCTGGAGAGAAG**
1401 **AGCCGAGGAGGTGGGCTGTGATGGATCAGTTCAGCTTTCAAATAAAAAGCGTTTTTATATTCTGTGTCGAGTTCGTGAACCCCTGTGGTGGCTTCTCC**

XhoI (1555)

1501 **ATCTGTCTGGGTTAGTACCTGCCACTATACTGGAATAAGGGGACGCTGCTTCCCTCGAGTTGGCTGGACAAGGTTATGAGCATCCGTGACTTATGGGG**
1601 **TTGCCAGCTTGGTCTGGATCGCCCGGCCCTTCCCCACCCGTTCCGTTCCCCACCACCACCCGCGCTCGTACGTGCGTCTCCGCTGCAGCTCTTGAC**
1701 **TCATCGGGGCCCCGGGTACATGCGCTCGCTCGGCTCTATAGGCGCCGCCCTGCCACCCCCCGCCGCGTGGGAGCCGACCCGCCACTCCT**

HindIII (1816)

1801 **GCTCTCTCTGCGCCGAGCTTCGAGGGGCTCGCATCTCTCTTCCACGCGCCCGCCGCTTACCTGAGGCGCCATCCACGCCGTTGAGTCCGCTTCTGC**
1901 **CGCCTCCCGCCTGTGGTGCCTCCTGAACTGCGTCCGCCGCTAGGTAAGTTAAAGCTCAGGTCGAGACCGGGCCTTTGTCCGGCGCTCCCTTGGAGCCT**
2001 **ACCTAGACTCAGCCGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTTTCTGTTCTGCGCCGTTACAGATCAAGCCA**

NcoI (2101)

2101 **CCATGGAAATCAAGGTGCTGTTTGGCCCTCATCTGTATTGCTGTTGCTGAGGCAAAACCCACTGAAATCAATGAAGACCTCAATATAGCTGCTGTGGCCTC**
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 L N I A A V A S**

BglIII (2216)

2201 **CACTTTGCCACCACAGATCTTGAGACTGACCTGTTCCACCACTGGGAGACCATGAATGTGATTAGCACTGACACAGAGCAGGTGAACACAGATGCTGAC**
33▶ **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 N T D A D**
2301 **AGGGGCAAGCTGCCTGGCAAAAACTCCCCCAGATGCTCTGAGGGAGCTGGAGGCCAATGCCAGAAGGGCTGGTTGCACAAGAGGCTGCCTCATTGGC**
67▶ **R G K L P G K K L P D V L R E L E A N A R R A G C T R G C L I C**
2401 **TCTCCACATTAAGTGACCCCTAAGATGAAGAAATTTATCCCTGGCAGGTGCCACACTTAAAGGTGAAAAGGAGTCTGCTCAGGGAGGGATTGGAGA**
100▶ **L S 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 A Q G G I G E**

EcoRV (2513)

2501 **GGCAATTGTTGATATCCCAGAGATTCTGGCTTCAAGGATAAGGAGCCACTGGACCAGTTTATTGCTCAAGTGGACCTCTGTGCTGATTGCACCACTGGC**
133▶ **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 D C T T G**
2601 **TGTCTGAAGGGCCTTGCCAAATGTCCAGTGTCTGACCTCCTGAAGAAGTGGCTTCCCAGAGGTGTACCCTTTTGCAGCAAGATTGAGGGTAGGGTGG**
167▶ **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 I Q G R V**

NheI (2735)

2701 **ACAAAATCAAGGTCTGGCTGGGGACAGATGATAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAACCCACAACCTAGAATGCAGTGA**
200▶ **D K I K G L A G D R •**
2801 **AAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAGTTAACACAACAATTGCATTCAATTTA**
2901 **TGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTAATTCTAAAATACAGCATAGCAAACT**

3001 **TTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCC**
3101 **TCACCTTCTTTTATGAGGATTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTGCTCTTCAATTTTATGTTTTAAATGCACTGACCTCCACATTCC**

SspI (3214)

3201 **CTTTTTAGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAAT**
3301 **ATCCCCAGTTTGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTTGGACAGCAAGAAAGCGAGCTTCTAGCTTATCTCAGTCTGCTCTC**
125▶ **• D Q E E**
3401 **CTGCCACAAAGTGACAGCAGTTGCCGGCCGGTTCGCGCAGGGCGAACTCCCGCCCCACGGCTGCTGCGCATGCTCGGTATGGCCGGCCGGAGGCGCTC**
120▶ **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 P G S A D**

3501 CCGGAAGTTCGTGGACACGACCTCCGACCACTCGGCGTACAGCTCGTCCAGGCCGCGCACCCACACCAGGCCAGGGTGTGTCCGGCACCACCTGGTCC
87 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 P V V Q D

SgrAI (3642)

3601 TGGACCGCGCTGATGAACAGGGTCACGTCGTCCCGACCAACCCGCGAAGTCGTCTCCACGAAGTCCCGGGAGAACCCGAGCCGGTCGGTCCAGAACT
53 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 R D T W F E

3701 CGACCGCTCCGGCGACGTCGCGCGCGGTGAGCACCGGAACGGCACTGGTCAACTTGGCCATGATGGCTCCTCCTGTCAGGAGAGAAAGAGAAGAAGTT
20 V A G A V D R A T L V P V A S T L K A M

3801 AGTACAATTGCTATAGTGAGTTGTATTATACTATGCAGATATACTATGCCAATGATTAATTGTCAAACTAGGGCTGCAGGTTAATTAAGAACATGTGAGC
ACTAGGGCTGCAGGTTAATTAAGAACATGTGAGC

3901 AAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCA

4001 AGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCG

4101 GATACCTGTCCGCCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGG

4201 CTGTGTGCACGAACCCCGTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCA

4301 GCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTAT

4401 TTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGT

4501 TTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACTCACGTTAA

4601 GGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCA