



**PvuI (7)**  
**SgfI (6)**
**MfeI (82)** **EcoNI (96)**

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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**Psp1406I (203)**
**HindIII (245)** **Bsu36I (291)**

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCGCTACCTGAGGCC  
 301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGTCTTTGTTTCGTTT

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**NcoI (560)**  
**BstEII (555)**  
**AgeI (552)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCCCTACCTGAGATCACCGGTACCATGGAGCCTCCTGGAGACTGGGGCCTCCTCCCTGGAG  
 601 ATCCACCCCAAAAACCGAGCTCTTGAAGGCTGGTGTGATCTCACCTTCTGGGAGCCCTGCTACGCCACAGCTCTGCCGTCTGCAAGGAGCGAG  
 13▶ S T P K T D V L R L V L Y L T F L G A P C Y A P A L P S C K E D E

**StuI (755)** **DraII (777)**

701 TACCCAGTGGGCTCCGAGTGTGCCCAAGTGCAGTCCAGGTTATCGTGTGAAGGAGGCTGCGGGGAGCTGACGGGCACAGTGTGTGAACCTGCCCTC  
 47▶ Y P V G S E C P K C S P G Y R V K E A C G E L T G T V C E P C P

**BstXI (816)**
**NcoI (866)** **BssHII (876)**

801 CAGGCACCTACATTGCCACCTCAATGGCCTAAGCAAGTGTCTGCAGTCCAAATGTGTGACCCAGCCATGGGCTGCGCGGAGCCGGAAGTCTCCAG  
 80▶ P G T Y I A H L N G L S K C L Q C Q M C D P A M G L R A S R N C S R

**SrfI (995)**

901 GACAGAGAACGCCGTGTGTGGCTGCAGCCAGGCCACTTCTGCATCGTCCAGGACGGGACCCTGCGCCGCGTCCGCGCTTACGCCACCTCCAGCCCG  
 113▶ T E N A V C G C S P G H F C I V Q D G D H C A A C R A Y A T S S P

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**DraIII (1038)**
**XcmI (1076)**

1001 GGCCAGAGGGTGCAGAAGGGAGGCACCGAGAGTCCAGGACCCCTGTGTGCAAGTCCCGCCCGGGGACCTTCTCTCCCAATGGGACCCCTGGAGGAATGTC  
 147▶ G Q R V Q K G G T E S Q D T L C Q N C P P G T F S P N G T L E E C

**PvuII (1116)**

1101 AGCACCAGACCAAGTGCAGCTGGCTGGTGCAGAAAGCCGGAGCTGGGACCAGCAGCTCCCACTGGGTATGGTGGTTTCTCTCAGGGAGCCTCGTCATCGT  
 180▶ Q H Q T K C S W L V T K A G A G T S S S H W V W W F L S G S L V I V

**NdeI (1227)**

1201 CATTGTTTGTCCACAGTTGGCCTAATCATATGTGTGAAAAGAAGAAAGCCAAAGGGGTGATGTAGTCAAGGTGATCGTCTCCGTCAGCGGAAAAGACAG  
 213▶ I V C S T V G L I I C V K R R K P R G D V V K V I V S V Q R K R Q

**SdaI (1332)**

1301 GAGGCAGAAGGTGAGGCCACAGTCAATGAGGCCCTGACGGCCCTCCGGACGTACCACGGTGGCCGTTGGAGGAGACAATACCCTCATTACAGGGGAGGA  
 247▶ E A E G E A T V I E A L Q A P P D V T T V A V E E T I P S F T G R

**MscI (1422)**

1401 GCCCAAACCACTGACCGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACTAGAATGCAGTGAAAAAATGCTTTATTTGT  
 280▶ S P N H •

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**HpaI (1554)**
**MfeI (1565)**

1501 GAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAATTGCATTCTTTTATGTTTCAGGTTTCAGGGGG

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**EcoRI (1650)**

1601 AGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCT  
 1701 ACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTA

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**SapI (1832)**
**SspI (1889)**

1801 AGATATAGTGTATTTTCCCAAGGTTTGAAGTCTCTTCAATTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTATGATAAATATTTCAGAA

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**SwaI (1903)**

1901 ATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGA  
 2001 CTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTTCTCAATGG

**SacI (2164)**
**BstXI (2193)**

2101 TGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCCCT  
 127▶ T K V L K G N M E I L V F C D P A Y D S I L E R C M G C P S V V R  
 2201 GATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCT  
 94▶ I S R D V E D S Y P H R V A V I T D F D K Q G N S V A S G I A I A

**StuI (2328)**

2301 TCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCCGACATGGTCTGTG  
 60▶ E A C V T V R G I Y A E I H V A S I I E G T K T R I A A G V H H K N

2401 TGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGTCCAGATCTGTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCCTATAGTG  
27 D E Y L M T I K E T A V E V L E L D Q Q S I N F T K M ←

2501 AGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCT  
←

2601 GCTTATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGCGGAGTTGTTACGACATTTTGAAAGTCCC GTTGATTTACTAGTCAA  
←

2701 AACAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCA

2801 TGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATT  
←

2901 GACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTC  
←

3001 CCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCTGTTGGCGGTCCAGCCAGGCGGGCCATTTACCGTAAAGTTATGTAA

3101 CGCCTGCAGGTTAATTAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCC  
←

3201 CCTGACGAGCATCAGAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTCCCTGGAAGCTCCCTCGTGC

3301 GCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGTTTCTCATAGCTCACGCTGTAGGTATCTCAG

3401 TTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCGCTGGCGCTTATCCGGTAACTATCGTCTTGAGTCCAAC

3501 CCGGTAAGACACGACTTATGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGC

3601 CTAACACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACA

3701 AACACCGCTGGTAGCGGTGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCT

3801 GACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGAATAAAATATCTTTATTTTCATT  
←

3901 ACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCAGT

4001 GCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA

**BbsI (2474)**  
**XmnI (2470)**  
**AseI (2536)**  
**SacI (2593)**  
**SpeI (2691)**  
**SnaBI (2819)**  
**NdeI (2924)**  
**SdaI (3102) PacI (3110) BspLU11I (3120)**  
**ApaLI (3434)**  
**EagI (3870)**  
**PacI (3850) SmaI (3859) NotI (3869)**