



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

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC  
 301 GCCATCCACGCGGTTGAGTGCCTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

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**KasI (535)**
**NcoI (560)** **BstEII (555)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATGGGCAAAGGAGATCCTAAGAAGCCGAGAGGCAAAAT  
 1 M G K G D P K K P R G K M

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**NsiI (608)** **NdeI (605)**

601 GTCCTCATATGCATTCTTTGTGCAAACTTGCCGGAGGAGCACAAGAAGAAGCACCCGGATGCTTCTGTCAACTTCTCAGAGTTTCCAAGAAGTGCTCA  
 13 S S Y A F F V Q T C R E E H K K K H P D A S V N F S E F S K K C S

**Tth111I (711)**

701 GAGAGGTGGAAGACCATGCTCTGCTAAAGAAAAGGGAAATTTGAAGATATGGCAAAGGCTGACAAGGCTCGTTATGAAAGAGAAAATGAAAACCTACATCC  
 47 E R W K T M S A K E K G K F E D M A K A D K A R Y E R E M K T Y I

**EcoO109I (830)** **StuI (850)**

801 CCCCCAAAGGGGAGACCAAAAAGAAGTTCAAGGACCCCAATGCACCCAAGAGGCTCCTTCGGCCTTCTTCTGTTCTGTTCTGAGTACCGCCCCAAAT  
 80 P P K G E T K K K F K D P N A P K R P P S A F F L F C S E Y R P K I

**PstI (968)**

901 CAAAGCGAGCATCTGGCTTATCCATTGGTGATGTTGCAAAGAACTAGGAGAGATGTGGAACAACACTGCAGCAGATGACAAGCAGCCCTATGAGAAG  
 113 K G E H P G L S I G D V A K K L G E M W N N T A A D D K Q P Y E K  
 1001 AAAGCTGCAAGTGAAGGAGAAGTATGAGAAGTATGCTGCCTACAGACTAAAGGAAAACCTGATGCAGCGAAAAAGGGGTGGTCAAGGCTGAAA  
 147 K A A K L K E K Y E K D I A A Y R A K G K P D A A K K G V V K A E  
 1101 AGAGCAAGAAAAAGGAAGAGGAAGATGATGAGGAGGATGAAGAGGATGAGGAAGAGGAGGAAGAAGGAAGACGAAGATGAAGAAGAAGATGATGA  
 180 K S K K K K E E E D D E E D E E E E E E E E E E D E D E E E D D D

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**MscI (1237)** **NheI (1231)**

1201 TGATGAATAAGTTGGTCTAGCGCAGTTTTTGTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAA  
 213 D E •

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**HpaI (1369)** **MfeI (1380)**

1301 AAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAACAAGTTAACAACAACATTGCATTCATTTATGT

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**EcoRI (1465)**

1401 TTCAGGTTGAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTTAACCT  
 1501 CCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTT  
 1601 CTTTCATGGAGTTAAGATATAGTGATTTTTCCAAGGTTTGAAGTACCTCTTCAATTTCTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTAA

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**SspI (1704)** **Swal (1718)**
**EcoO109I (1779)**

1701 GTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCC  
 1801 AGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGA  
 1 N R T Y K L P I

**SacI (1979)**

1901 TGAGTTCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACA  
 132 L E E I T 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

**BstXI (2008)**

2001 GGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGAC  
 99 P S V V R 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

**StuI (2143)**

2101 CCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCC  
 65 G I A I A 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

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**BspHI (2293)** **XmnI (2285)**

2201 CGACATGGTGCTTGTTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGAT  
 32 V H H K N 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

**AseI (2351)**

2301 GGCCCTCTATAGTGCATTTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTT

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**SacI (2408)**

2401 CACTAAACGAGCTCTGTTATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGT

2501 **SpeI (2506)**  
 TGATTTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCC

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2601 **SnaBI (2634)**  
**Eco105I (2634)**  
 AAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTA CTGCAAGTAGGAAAGTCCATAAGGTCATGTA CTGGGCATAATGCCAGGCGGG

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2701 **NdeI (2739)**  
 CCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTA CTGCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGA

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2801 CGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGACGCCAGGCGGGCCATTTA

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2901 **PstI (2918)**  
**SdaI (2917)** **PacI (2925)** **BspLU11I (2935)**  
 CCGTAAGTTATGTAACGCCTGCAGGTTAATTAGAACATGTGAGCAAAAGGCCAGGAAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTC

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3001 CATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTG

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3101 GAAGCTCCCTCGTGCGCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACG

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3201 **ApaLI (3249)**  
 CTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTTCAGCCGACCGCTGCGCTTATCCGGTAACTAT

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3301 CGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGT

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3401 TCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGA AAAAGAGTTGGTAGCTC

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3501 TTGATCCGCAAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTTTTGTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATC

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3601 **EagI (3685)**  
**PacI (3665)** **SwaI (3674)** **NotI (3684)**  
 TTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGAATAAAAT

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3701 ATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAA

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3801 TAGGCTGTCCCGAGTGAAGTGCAAGTGCCAGGTGCCAGAACATTTCTCTATCGAA