



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

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGACAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCGAGGGGCTCGCATCTCTCTTACACGGCCCGCCGCCCTACCTGAGGCC  
 301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)** **NaeI (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGTCTTTGTTTCGTTT

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**KasI (535)**
**SphI (560)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTGAGCATGCCCTCCGACCGGCCTTTCAAGCAGCGGGCGAGCTT  
1 M P S D R P F K Q R R S F

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**Eco47III (668)** **AfeI (668)** **PvuII (688)**

601 CGCCGACCCTGTAAGGAGGTGCAGCAGATCCGCGACCAGCACCCAGTAAGATCCCGGTGATCATCGAGCGCTACAAGGGTGAAGCAGCTGCCTGTC  
 13 A D R C K E V Q Q I R D Q H P S K I P V I I E R Y K G E K Q L P V

**BstXI (710)** **HpaI (733)** **KasI (764)** **StuI (791)**

701 CTGGATAAGACCAAGTTTCTGGTCCAGACCATGTTAAACATGAGCGAGTTGGTCAAGATCATCCGGCGCCGCTGCAACTCAACCCACGCAGGCCCTTCT  
 47 L D K T K F L V P D H V N M S E L V K I I R R R L Q L N P T Q A F

**BbsI (874)**

801 TCCTGCTGGTCAACCAGCACAGCATGGTGAAGCTTCCACACCCATCGTGACATCTATGAACAGGAGAAGGATGAAGACGGATTCTCTACATGGTCTA  
 80 F L L V N Q H S M V S V S T P I A D I Y E Q E K D E D G F L Y M V Y

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**MscI (951)** **NheI (945)**

901 CGCCTCCAAGAACCTTCGGCTTCTGAGTCAAGAGGAGGGGAGGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACA  
 113 A S Q E T F G F •

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**HpaI (1083)** **MfeI (1094)**

1001 GAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACA  
 1101 CATTCAATTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGTTTTTAAAGCAAGTAAACCTCTACAAATGGTATGGAATTCTAAAAATACAGCATAG  
 1201 CAAAATTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTT  
 1301 TGCAGCCTCACCTCTTTTATGAGTAAAGATATAGTATTTTCCCAAGTTTGAAGTACTAGCTTTCATTTCTTTATGTTTTAAATGCACCTGACCTCCC

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**SspI (1418)** **SwaI (1432)**
**EcoO109I (1493)**

1401 ACATTCCCTTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAAATAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCT  
 1501 TCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGT  
141 • N R T

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**SacI (1693)**

1601 GTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCT  
 137 Y K L P I 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

**BstXI (1722)**

1701 CTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGT  
 103 R C M G C 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

**StuI (1857)**

1801 TGCTCACAGCAGACCAATGGCAATGGCTTCCAGCACAGACAGTACCCTGCAATGTAGGCCTCAATGTGACAGCAGAGATGATCTCCCAGTCTTGGT  
 70 S V A S 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

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**XmnI (1999)**

1901 CCTGATGGCCGCCCGACATGGTGTGTTGTCCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTG  
 37 R I A A G 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

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**BspHI (2007)** **BbsI (2003)**
**AseI (2065)**

2001 AAGGTTCTCATGATGGCCCTCTATAGTGAAGTCTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAG  
 3 F T K M

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**SacI (2122)**

2101 CTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATT

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**SpeI (2220)**

2201 TTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCC

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**SnaBI (2348)**

2300 CATTGATGTAAGTCCAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTCCCAAGTAGGAAAGTCCATAAGGTCACTGACTGGGC

**NdeI (2453)**

2400 ATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAA

2500 TACTCCACCCATTGACGTCAATGAAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGCGGGGGTCTGTTGGCGGTGACG

**PstI (2632)**

**SdaI (2631)** **PacI (2639)** **BspLU11I (2649)**

2600 CAGGCGGGCCATTTACCGTAAGTTATGTAACGCC T G C A G G T T A A T T A A G A A C A T G T G A G C A A A A G G C C A G C A A A A G G C C A G G A A C C G T A A A A A G G C C G

2698 CGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCAGAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATA

2798 CCAGGCGTTTTCCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCG

**ApaLI (2963)**

2898 CTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAGCCCGACCGCTGCG

2998 CTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGT

3098 AGGCGGTGTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGA

3198 AAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACACCCTGGTAGCGGTGGTTTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTC

**PacI (3379)** **SwaI (3388)**

3298 AAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC

**EagI (3399)**

**NotI (3398)**

3398 A G C G G C C G C A A T A A A A T A T C T T T A T T T T C A T T A C A T C T G T G T T G G T T T T T T G T G T A A T C G T A A C T A A C A T A C G C T C C A T C A A A C A A A C G A A A C

3498 A A A C A A A C T A G C A A A A T A G G C T G T C C C C A G T G C A A G T G C A G G T G C C A G A A C A T T T C T A T C G A A