



**PvuI (7)**  
**SgfI (6)** MfeI (82) EcoNI (96)  
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)** **Bsu36I (291)**  
**Psp1406I (203)** **PvuII (239)** EcoNI (287)  
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACACGCCGCCGCCCTACCTGAGGCC  
301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

**NcoI (560)**  
**BstEII (555)**  
**AgeI (552)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGCCCTACCTGAGATCACCGGTACCATGGAAAGGGTCCAACCCCTGGAAGAGAATGTGGGAAA  
601 TGCAGCCAGGCCAAGATTCGAGAGGAACAAGCTATTGCTGGTGGCCTCTGTAATTCAGGGACTGGGGCTGCTCTGTGCTTCACCTACATCTGCCTGCAC  
13▶ A A R P R F E R N K L L L V A S V I Q G L G L L C F T Y I C L H  
1▶ M E R V Q P L E E N V G N

**SapI (706)**  
701 TTCTCTGCTCTTCAGGTATCACATCGGTATCCTCGAATCAAAGTATCAAAGTACAATTTACCGAATATAAGAAGGAGAAAGGTTTCATCCTCACTTCCC  
47▶ F S A L Q V S H R Y P R I Q S I K V Q F T E Y K K E K G F I L T S

**BspHI (815)**  
801 AAAAGGAGGATGAAATCATGAAGGTGCAGAACAACCTCAGTCATCATCAACTGTGATGGGTTTTATCTCATCTCCCTGAAGGGCTACTTCTCCAGGAAGT  
80▶ Q K E D E I M K V Q N N S V I I N C D G F Y L I S L K G Y F S Q E V  
901 CAACATTAGCCTTCATTACCAGAAGGATGAGGAGCCCTCTTCCAACCTGAAGAAGGTCAGGTCTGTCAACTCCTTGATGGTGGCTCTCTGACTTACAAA  
113▶ N I S L H Y Q K D E E P L F Q L K K V R S V N S L M V A S L T Y K

**Tth111I (1000)** **BstXI (1050)** **BsaBI (1071)** **XcmI (1080)**  
1001 GACAAAGTCTACTTGAATGTGACCACTGACAATACCTCCCTGGATGACTTCCATGTGAATGGCGGAGAAGTATTCTTATCCATCAAATCCTGGTGAAT  
147▶ D K V Y L N V T T D N T S L D D F H V N G G E L I L I H Q N P G E

**NheI (1151)**  
1101 TCTGTGCTTTGAGGGGCTGATGGCAATATCTAAAACAGGCACCAGCATGCTAGTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCA  
180▶ F C V L •

**HpaI (1289)**  
1201 CAACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAAACAACA

**MfeI (1300)**  
1301 CAATTGCATTCAATTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACA  
1401 GCATAGCAAAACTTTAACCTCCAATCAAGCCTCTACTGAACTCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTA

**SapI (1567)**  
1501 GCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTCTTCAATTTCTTATGTTTTAAATGCACTGA

**SspI (1624)** **SwaI (1638)** **EcoO109I**  
1601 CCTCCCACATTCCCTTTTGTAGAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAA  
1701 GGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTT  
141 • N

**SacI (1899)**  
1801 CCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATG  
139▶ R T 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

**BstXI (1928)**  
1901 AGCTCTGACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCT  
105▶ L E 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

**StuI (2063)**  
2001 GCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGT  
72▶ G N 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  
2101 CTTGGTCTGATGGCCGCCCGACATGGTGCTTGTGCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAG  
39▶ K T 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

**BbsI (2209)** **AseI (2271)**  
2201 ATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAAGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGT  
5▶ I N F T K M

**SacI (2328)**  
2301 CTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTAC

**SpeI (2426)**  
2401 GACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCCATGACGTAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCC

2501 **SnaBI (2554)**  
ACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTCCCAAGTAGGAAAGTCCATAAGGTCATGTAC

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2601 **NdeI (2659)**  
TGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCAGTTTACC

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2701  
GTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGG

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2801 **PacI (2845)**  
**PstI (2838)**  
**SdaI (2837)** **BspLU11I (2855)**  
TCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAATTAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGG

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2901  
CCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAG

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3001  
ATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTG

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3101 **ApaLI (3169)**  
GCGCTTTTCATAGCTCACGCTGTAGGTATCTCAGTTCGGGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCT

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3201  
GCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTA

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3301  
TGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTC

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3401  
GGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGAT

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3501 **PacI (3585)** **SwaI (3594)**  
CTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCAATGGCTAGTTAATTAACATTTAA

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3601 **EagI (3605)**  
**NotI (3604)**  
ATCAGCGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAAAACAAAACGA

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3701  
AACAAAACAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA