



**PvuI (7)**  
**SgfI (6)** MfeI (82) EcoNI (96)  
1 GGATCTGGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)** **Bsu36I (291)**  
**Psp1406I (203)** **PvuII (239)** EcoNI (287)  
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC  
301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCGCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGTCTTTGTTTCGTTT

**KasI (535)** **AgeI (552)** **KasI (564)** **XcmI (596)**  
501 TCTGTTTGTCCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATGGCGCCTCTTTCTATCACTATCTGCCCGTGCCTT  
601 GGATGAGATGGGGGGAAGCAAGGATGGGGCAGCCACCGCAGTGGCTGGGGCCCGCATCTTGGTGGTCTGTTCGGGTTACCTTAGTCATCTGACA  
13▶ D E M G G K Q G W G S H R Q W L G A A I L V V L F G V T L V I L T  
1▶ M A P S F Y H Y L P V P M

**BstAPI (777)**  
701 ATCTACTTCGCCGTCACAGCGAACAGCTGGCCTGTAGAGACGGGTTGCGAGCGCAGGCTGAGTGCCGGAACACCACGCACCTGTTGCAGCGCCAGCTCA  
47▶ I Y F A V T A N S V A C R D G L R A Q A E C R N T T H L L Q R Q L

**PstI (820)**  
801 CCCGACCCAGGACAGTCTGCTGCAGGCCGAGACACAGGCAAACCTCTGCAACCTGACCGTGGTACCCTTCAGGAGTCCCTGGAGAAGAAGGTGTCTCA  
80▶ T R T Q D S L L Q A E T Q A N S C N L T V V T L Q E S L E K V S Q

**BamHI (977)**  
901 AGCCCTGGAGCAGCAGGCCCGCATCAAGGAGCTTGAGAATGAAGTACGAAGCTGAACAGGAGCTGGAGAATCTGAGGATCCAAAAGGAGACTTCTAGC  
113▶ A L E Q Q A R I K E L E N E V T K L N Q E L E N L R I Q K E T S S

**BstXI (1037)**  
1001 ACAGTGCAGGTGAAGTCTGGCAGCTCCATGGTGGTCTCCAGCCTACTGGTCTCAAAGTGTACTGTTTCTGCTCTTTGAGGACTCATTAGTTGGCAGG  
147▶ T V Q V N S G S S M V V S S L L V L K V S L F L L F •

**MscI (1111)** **NheI (1105)**  
1101 TCACAGCTAGCTGCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGA

**HpaI (1243)** MfeI (1254)  
1201 TGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAGTTAAACAACAACATTCATTTCATTTTTCAGGTTTCAGGGGAGGTGTGGAG

**EcoRI (1339)**  
1301 GTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGAATTCTAAATACAGCATAGCAAACCTTTAACCTCAAATCAAGCCTCTACTTGAATCCT  
1401 TTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAGATATAGTGT

**SapI (1521)** **SspI (1578)** **SwaI (1592)**  
1501 ATTTTCCCAAGGTTTGAAGTACTGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTATAGTAAATATTCAGAAATAATTTAAAT

**EcoO109I (1653)**  
1601 ACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCAATAATATCCCCAGTTTGTAGTGTGGACTTAGGGAACA  
1701 AAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACC  
141▶ N R T Y K L P I L E E I T T K V

**SacI (1853)** **BstXI (1882)**  
1801 AGCTTGCCATTCTCAATGAGCACAAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATGCTGT  
123▶ 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 I S R D  
1901 CCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGAC  
90▶ 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 E A C V

**StuI (2017)**  
2001 AGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTGTTGTCCTCATAG  
57▶ 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 D E Y

**BbsI (2163)** **XmnI (2159)**  
2101 AGCATGGTATCTTCTAGTGGGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCTATAGTGAAGTCTATTAT  
23▶ 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 (2225)** **SacI (2282)**  
2201 ACTATCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGA

**SpeI (2380)**  
2301 CCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAACTCCC  
2401 ATTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGGTCAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCC

**SnaBI (2508)**  
2501 ATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCATAAGGTCATGACTGGGCATAATGCCAGGCGGGCCATTTACCGTCAATTGACGTCAATAG

**NdeI (2613)**  
 2601 GGGGCGTACTTGGCATATGATACTTGTACTGCTCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGT  


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PacI (2799)  
PstI (2792)  
**SdaI (2791)**  
 2701 TACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGGTCTGTTGGGCGGTGAGCCAGGCGGGCCATTACCGTAAGTTATGTAACGCCTGCAGGT  


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**BspLU11I (2809)**  
 2801 TAAITTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCA  



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 2901 TCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGGCTCTCCTGTT  


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 3001 CCGACCCTGCCGTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGG  


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**ApaLI (3123)**  
 3101 TCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACA  


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 3201 CGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGC  


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 3301 TACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTG  


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 3401 GTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTG  


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**EagI (3559)**  
PacI (3539) SwaI (3548) **NotI (3558)**  
 3501 GAACGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTG  


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 3601 TTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCGAGTGCAAGTGCAGG  
 3701 TGCCAGAACATTTCTCTATCGAA