



**PvuI (7)**  
**SgfI (6)** 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
**MfeI (82)** **EcoNI (96)**  
101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGTGTCGTGTAAGTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)** **Bsu36I (291)**  
**Psp1406I (203)** **PvuII (239)** 201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC  
**EcoNI (287)**  
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

**SphI (560)**  
**AgeI (552)** 501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTCAGCATGCGACCGACGCTGCTGGTGCCTGCTGCTGCTGCT  
1▶ M R P T L L W S L L L L L

**BbsI (604)** **SacII (620)** **PvuII (646)** **BsrBI (653)** **BsrGI (680)**  
601 CGGAGTCTTCGCCCGCGCCGCGGCCCGCCAGACCCTTTTCCAGCTGCCCCCTCTCAGCACCCGAAGATTGCGCTGTACAACGCAGAGCAGGTC  
13▶ G V F A A A A A A P P D P L S Q L P A P Q H P K I R L Y N A E Q V  
**EagI (788)**  
701 CTGAGTTGGGAGCCAGTGGCCCTGAGCAATAGCACGAGGCTGTGTCTACCAAGTGCAGTTTAAATACACCGACAGTAAATGGTTCACGGCCGACATCA  
47▶ L S W E P V A L S N S T R P V V Y Q V Q F K Y T D S K W F T A D I

**BsrGI (817)**  
801 TGTCCATAGGGGTGAATTGTACACAGATCACAGCAACAGAGTGTGACTTCACTGCCGACGTCCTCAGCAGGCTTCCAATGGATTTCAATGTCACTCT  
80▶ M S I G V N C T Q I T A T E C D F T A A S P S A G F P M D F N V T L  
901 ACGCTTCGAGCTGAGCTGGGAGCACTCCATTCTGCCTGGTGACAATGCTGGTTTCAACACTATCGGAATGTGACTGTCCGGCCCTCAGAAAAATT  
113▶ R L R A E L G A L H S A W V T M P W F Q H Y R N V T V G P P E N I

**BstEII (1002)**  
1001 GAGGTGACCCAGGAGAAGGCTCCCTCATCATCAGGTTCTCCTCTCCCTTGGACATCGTGTATACCTCCACGGCCTTTTTTTGTTATTATGTCCATTACT  
147▶ E V T P G E G S L I I R F S S P F D I A D T S T A F F C Y Y V H Y

**BstXI (1148)**  
1101 GGGAAAAAGGAGGAATCCAACAGGTCAAAGGCCCTTTCAGAAGCAACTCCATTTATTGGATAACTTAAACCCTCCAGAGTGTACTGTTTACAAGTCCA  
180▶ W E K G G I Q Q V K G P F R S N S I S L D N L K P S R V Y C L Q V Q  
1201 GGCACAACGCTTTGGAACAAAAGTAACATCTTTAGAGTGGGCAATTAAGCAACATATCTTGTACGAAACAATGGCAGATGCTCCACTGAGCTTCAG  
213▶ A Q L L W N K S N I F R V G H L S N I S C Y E T M A D A S T E L Q  
1301 CAAGTCATCCTGATCTCCGTGGAAACATTTTCGTTGCTGTCGGTGGTGGCAGGAGCCTGTTTCTTCTGGTCTGAAATATAGAGGCTGATTAATACT  
247▶ Q V I L I S V G T F S L L S V L A G A C F F L V L K Y R G L I K Y  
1401 GGTTCACACTCCACCAAGCATCCATTACAGATAGAAGAGTATTTAAAAGACCAACTCAGCCCATCTAGAGGCTTGGACAAGGACAGCTCACAAA  
280▶ W F H T P P S I P L Q I E E Y L K D P T Q P I L E A L D K D S S P K

**BspEI (1536)**  
1501 GGATGACGCTGGGACTCTGTGTCCATTATCTCGTTTCCGAAAAGGAGCAAGAAGATGTTCTCAAACGCTTGAACCAAAGCATGGGCTAGCCACT  
313▶ D D V W D S V S I I S F P E K E Q E D V L Q T L •

**MscI (1606)**  
**NheI (1600)** 1601 GCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACAGATGCAAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTA

**HpaI (1738)** **MfeI (1749)**  
1701 TTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACATTCATTATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTT

**EcoRI (1834)**  
1801 TTAAGCAAGTAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTGAACTCTTTTCT  
1901 GAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTTCATGGAGTTAAGATATAGTGATTTTT

**SapI (2016)** **SspI (2073)** **SwaI (2087)**  
2001 CCCAAGGTTTGAAGTCTCTTCTTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAATATTCAGAAATAATTTAAATACATC  
2101 ATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGA  
2201 ACCTTTAATAGAATTTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTT  
141▶ N R T Y K L P I L E E I T T K V L K

**SacI (2348)** **BstXI (2377)**  
2301 GCCATTATCTCAATGAGCACAAGCAGTCAAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCTGAGTGGATCTGTCCACC  
122▶ 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 V  
2401 TCATCAGAGTAGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGA  
88▶ 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 T V  
2501 CCCTGCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCGTCTTGGTCTGATGGCCGCCCGACATGGTGTCTTGTCTCATAGAGCAT  
55▶ 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 L M

**BbsI (2658)**  
2601 GGTGATCTTCTCAGTGGGACCTCCACAGCTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAAGTATTATACTAT  
22▶ T I K E T A V E V L E L D Q Q S I N F T K M

2701 **AseI (2720)** **SacI (2777)**  
 GCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCC

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2801 **SpeI (2875)**  
 CACCGTACACGCCTACCGCCATTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAACAACTCCCATTGA

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2901  
 CGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGAC

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3001 **SnaBI (3003)**  
 TAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGC

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3101 **NdeI (3108)**  
 GTACTTGGCATATGATACACTTGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCTATTGGCGTTACTA

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3201 **PacI (3294)** **PstI (3287)** **SdaI (3286)**  
 TGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAAAT

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3301 **BspLU11I (3304)**  
 AAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACA

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3401  
 AAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCCGAC

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3501  
 CTGCGCGTTACCGGATACCTGTCCGCCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTT

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3601 **ApaLI (3618)**  
 CGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTGAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACAGGACT

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3701  
 TATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACAC

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3801  
 TAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCCGCTGGTAGC

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3901  
 GGTGGTTTTTTTGGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACG

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4001 **PacI (4034)** **Swal (4043)** **EagI (4054)** **NotI (4053)**  
 AAAACTCACGTAAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGT

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4101  
 TTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCGAGTGAAGTGCAGGTGCCA

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4201  
 GAACATTTCTATCGAA