



**PvuI (7)**  
**SgfI (6)** 1 GGATCTGCGATCGCTCCGGTGCCTGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
MfeI (82) EcoNI (96)

101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGTGTCGTGTAAGTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)**  
**Psp1406I (203)** 201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCTCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCCCGCCGCCCTACCTGAGGCC  
PvuII (239) EcoNI (287) **Bsu36I (291)**

301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)** 401 GGGCCTTTGTCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTGTTTCGTTT

**NcoI (560)**  
**BstEII (555)**  
**KasI (535)** 501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCACCATGGCATTGCCCTTTGCTTTAATGATGGCCTGGTGGT  
AgeI (552) 1▶ M A L P F A L M M A L V V

**PvuII (603)** 601 GCTCAGCTGCAAGTCAAGCTGCTCTCTGGGCTGTAATCTGTCTCAAACCCACAGCCTGAATAACAGGAGGACTTTGATGCTCATGGCACAATGAGGAGA  
13▶ L S C K S S C S L G C N L S Q T H S L N N R R T L M L M A Q M R R  
701 ATCTCTCCTTTCTCTGCTGCAAGGACAGACATGACTTTGAATTTCCCGAGGAGAAATTTGATGGCAACAGTTCAGAAAGCTCAAGCCATCTCTGTCC  
47▶ I S P F S C L K D R H D F E F P Q E E F D G N Q F Q K A Q A I S V  
801 TCCATGAGATGATGCAGCAGACCTTCAATCTCTCAGCACAAAGAATCATCTGCTGCTTGGGATGAGACCCTCTAGAAAAATTCTACATTTGAACCTTT  
80▶ L H E M M Q Q T F N L F S T K N S S A A W D E T L L E K F Y I E L F

**XmnI (993)** 901 CCAGCAAATGAATGACCTGGAAGCCTGTGTGATACAGGAGGTTGGGGTGAAGAGACTCCCTGATGAATGAGGACTCCATCCTGGCTGTGAAGAAATAC  
113▶ Q Q M N D L E A C V I Q E V G V E E T P L M N E D S I L A V K K Y

**BspHI (1073)** 1001 TTCAAAGAATCACTCTTTATCTGATGGAGAAGAATACAGCCCTTGTGCTGGGAGGTTGTGAGAGCAGAAATCATGAGATCCCTCTCTTTTCAACAA  
147▶ F Q R I T L Y L M E K K Y S P C A W E V V R A E I M R S L S F S T

**MscI (1149)**  
**NheI (1143)** 1101 ACTTGCAAAAAAGATTAAGGAGGAAGGATTGAAAAGTGGTTCAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGA  
180▶ N L Q K R L R R K D •

**HpaI (1281)** **MfeI (1292)** 1201 ATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCA

**EcoRI (1377)** 1301 TTCATTTTATGTTTCAGGTTTCAGGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCAAAATACAGCATAGCA  
1401 AAACCTTAACTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGGCCAATGTGCATTAGCTGTTTG

**SapI (1559)** 1501 CAGCCTCACCTTCTTTATGAGTTTAAGATATAGTGTATTTCCCAAGGTTTGAAGTCTCTTCAATTTCTTTATGTTTTAAATGCACTGACCTCCAC

**SspI (1616)** **SwaI (1630)** **EcoO109I (1691)** 1601 ATTCCTTTTATGATAAATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTC  
1701 ATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGT  
141▶ • N R T Y

**SacI (1891)** 1801 ACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCCAGGAGCATAGTCAGAGATGAGCTCTCT  
136▶ 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 R

**BstXI (1920)** 1901 GCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTG  
103▶ 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 (2055)** 2001 CTCACAGCAGACCAATGGCAATGGCTTCCAGCAGACAGTACCCTGCCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCC  
69▶ 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 R

**XmnI (2197)** 2101 TGATGGCCGCCCCGACATGGTGTCTGTTGCTCATAGAGCATGGTGTCTTCTCAGTGGCGACTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAA  
36▶ 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 F

**BbsI (2201)** **AseI (2263)** 2201 GGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCT  
3▶ T K M

**SacI (2320)** 2301 IATCTGACGGTTCACAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTT

**SpeI (2418)** 2401 GAAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAAATCCCGTGAGTCAAACCGCTATCCACGCCAT

2501 TGATGTA CTG CCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTA CTG CCAAGTAGGAAAGTCCCATAAGGTCATGTA CTG GGCATA  
SnaBI (2546)

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2601 ATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTA CTG CCAAGTGGGCAGTTTACCGTAAATAC  
NdeI (2651)

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2701 TCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGGTCTGTTGGGCGGT CAGCCAG

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PacI (2837)  
PstI (2830)  
SdaI (2829)  
BspLU11I (2847)

2801 GCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTG  
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2901 CTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCAAACCCGACAGGACTATAAAGATACCAGG

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3001 CGTTTCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGCGCTTTC

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ApaLI (3161)

3101 TCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGACGAACCCCCGTT CAGCCCGACCGCTGCGCTTA

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3201 TCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCG

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3301 GTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAG

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3401 AGTTGGTAGCTCTTGATCCGGCAAACAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAA

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EagI (3597)  
PacI (3577) SwaI (3586) NotI (3596)

3501 GATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGG

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3601 CCGCAATAAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAAC

3701 AAAC TAGCAAAAATAGGCTGTCCCAAGTCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA