



**PvuI (7)**  
**SgfI (6)** MfeI (82) EcoNI (96)  
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)** Bsu36I (291)  
**Psp1406I (203)** **PvuII (239)** EcoNI (287)  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGGCC  
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NcoMIV (441)  
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

**SphI (560)**  
**AgeI (552)** EcoO109I (566)  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTCAGCATGCAGGTCCCTGTCTGCTTCTGGGCCTGCTGTTTAC  
1 M Q V P V M L L G L L F T

NcoMIV (604) **BbrPI (619)** HpaI (643)  
601 AGTTGCCGGCTGGAGCATCCACGTGTTGGCTCAGCCAGATGCAGTTAACGCCCACTCACCTGTCTACTCATTACCAGCAAGATGATCCCAATGAGT  
13 V A G W S I H V L A Q P D A V N A P L T C C Y S F T S K M I P M S  
701 AGGCTGGAGAGCTACAAGAGGATCACCAGCAGCGGTGCCAAAGAAGCTGTAGTTTTGTCCAAAGCTCAAGAGAGAGGTCTGTGCTGACCCCAAGA  
47 R L E S Y K R I T S S R C P K E A V V F V T K L K R E V C A D P K

BbsI (891)  
Bsu36I (885)  
801 AGGAATGGGTCCAGACATACATTAACAACTGGATCGGAACCAATGAGATCAGAACCTACAACCTTTATTTAACTGCATCTGCCCTAAGGCTTTCAGC  
80 K E W V Q T Y I K N L D R N Q M R S E P T T L F K T A S A L R S S A

**NsiI (938)**  
901 ACCTTTGAATGTGAAGTTGACCCGTAATCTGAAGCTAATGCATCCACTACCTTTTCCACAACCACTCAAGCACTTCTGTAGGAGTGACCAGTGTGACA  
113 P L N V K L T R K S E A N A S T T F S T T T S S T S V G V T S V T

**MscI (1038)**  
SpeI (1004) **NheI (1032)**  
1001 GTGAACACTAGTGTGACTCGGACTGTGATGCCTTCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAATGCAGTGAAA  
147 V N •

HpaI (1170) MfeI (1181)  
1101 AAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAGTTAAACAACAACCTAGCATTATTTTATG

**EcoRI (1266)**  
1201 TTTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACC  
1301 TCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGCAGCCTCACCT

**SapI (1448)**  
1401 TCTTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTGCTCTTCATTCTTTATGTTTTAATGCACTGACCTCCACATTCCTTTTT

**SspI (1505)** SwaI (1519) EcoO109I (1580)  
1501 AGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCC  
1601 CAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTCTGGTGTACTTGAGGGGG  
141 • N R T Y K L P

**SacI (1780)**  
1701 ATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCAC  
132 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 C M G C

**BstXI (1809)**  
1801 AGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGA  
99 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 S V A S

**StuI (1944)**  
1901 CCCAATGGCAATGGCTTCAGCACAGACAGTGACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCACTTGGTCTGATGGCCGCC  
66 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 I A A

BbsI (2090)  
**XmnI (2086)**  
2001 CCGACATGGTGCTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCAGCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGG  
32 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 T K M

**AseI (2152)**  
2101 TGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGT

**SacI (2209)**  
2201 TCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCG

**SpeI (2307)**  
2301 TTGATTTACTAGTCAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTGC

**SnaBI (2435)**  
 2401 CAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAAGTCATGTACTGGGCATAATGCCAGGCGG

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**NdeI (2540)**  
 2501 GCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTG

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2601 ACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTT

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**PstI (2719)**      **PacI (2726)**  
**SdaI (2718)**      **BspLU11I (2736)**  
 2701 ACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAGGCCAGGAAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTT

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2801 CCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCT

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2901 GGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCAC

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**ApaLI (3050)**  
 3001 GCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTAGCCCGACCGCTGCGCCTTATCCGGTAACTA

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3101 TCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAG

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3201 TTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCT

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3301 CTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGAT

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**EagI (3486)**  
**PacI (3466)**    **SwaI (3475)**    **NotI (3485)**  
 3401 CTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAA

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3501 TATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAA

3601 ATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA