



**PvuI (7)**  
**SgfI (6)** 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA MfeI (82)

101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**Psp1406I (203)** **HindIII (245)** **Bsu36I (291)**  
201 GTGAACGTTCTTTTTCGCAACGGGTTTCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCCTACCTGAGGCC

301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCTCTAGGTAAGTTAAAGTCAAGTGCAGACC

**NgoMIV (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

**KasI (535)** **AgeI (552)** **BspHI (560)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTTCATCAGACTGAAAGCATGATCCGGGACGTGGAGCTGGC 1 M S T E S M I R D V E L A

**Bsp120I (628)** **KasI (688)** **SapI (699)**  
601 CGAGGAGGCGCTCCCAAGAAGACAGGGGGGCCAGGGCTCCAGGCGGTGCTTGTCTCAGCCTCTTCTCTTCTGATCGTGGCAGGCGCCACCACG 13 E E A L P K K T G G P Q G S R R C L F L S L F S F L I V A G A T T

701 CTCTTCTGCTGCTGCACTTTGGAGTGATCGGCCCCAGAGGGAAGATTCCAGGACCTCTCTAATCAGCCCTTGGCCAGGCAAGTCAAGTCAAT 47 L F C L L H F G V I G P Q R E E F P R D L S L I S P L A Q A V R S

**XcmI (887)** **MscI (899)**  
801 CTTCTCGAACCCGAGTGACAAGCCTGTAGCCCATGTTGTAGCAAAACCTCAAGCTGAGGGGACGCTCCAGTGGCTGAACCGCCGGCCAATGCCCTCCT 80 S S R T P S D K P V A H V V A N P Q A E G Q L Q W L N R R A N A L L

901 GGCCAATGGCGTGGAGCTGAGAGATAACAGCTGGTGGTCCATCAGAGGGCTGTACCTCATCTACTCCAGGCTCTTCAAGGGCCAAGGCTGCCCC 113 A N G V E L R D N Q L V V P S E G L Y L I Y S Q V L F K G Q G C P

**PshAI (1053)**  
1001 TCCACCCATGTGCTCCTCACCCACACCATCAGCCGCATCGCCGTCTCCTACCAGACCAAGGTCAACCTCTCTGCCATCAAGAGCCCTGCCAGAGGG 147 S T H V L L T H T I S R I A V S Y Q T K V N L L S A I K S P C Q R

**BstEII (1174)** **Eco47III (1186)**  
1101 AGACCCAGAGGGGGCTGAGGCCAAGCCCTGGTATGAGCCCATCTATCTGGGAGGGGTCTCCAGCTGGAGAAGGGTACCGACTCAGCGCTGAGATCAA 180 E T P E G A E A K P W Y E P I Y L G G V F Q L E K G D R L S A E I N

**MscI (1270)** **NheI (1264)**  
1201 TCGGCCCCACTATCTCGACTTTGCCGAGTCTGGGCAGGTCTACTTTGGGATCATTGCCCTGTGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAG 213 R P D Y L D F A E S G Q V Y F G I I A L •

1301 TTTGGACAAACCACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAC

**HpaI (1402)** **MfeI (1413)** **EcoRI (1498)**  
1401 AAGTTAACAAACAATTGCATTCATTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGA 1501 ATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTG

**SapI (1680)**  
1601 CCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGTTTGAAGTACTTTCATTTCTTATGTT

**SspI (1737)** **SwaI (1751)**  
1701 TTAATGCACTGACCTCCACATTCCTTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAA

1801 TCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTGTAGTGGACTTAGGGAACAAAGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCT

1901 TCTAGCTTTGATGTTCTGTTGACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGTTCGTCATCTCAATGAGCACAAAGCAGTCAAGGAC 141 N 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

**SacI (2012)**  
2001 ATAGTCAGAGATGAGCTCTGTCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCCAATGGTG 110 Y D S I 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

**StuI (2176)**  
2101 TCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGA 76 D F D K Q 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

2201 TGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTCTTGTGCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAG 43 I E G T 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

**XmnI (2318)** **AseI (2384)**  
2301 ATCCTGCTGAGAGATGTTGAAGGCTTTCATGGTGGCCCTCTATAGTGTGATTACTATGCGGATATACTATGCCGATGATTAATTGTCAAACA 10 D Q Q S I N F T K M

**SacI (2441)**  
2401 GCGTGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGG

**SpeI (2539)**  
2501 GCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCGTGAGT

**SnaBI (2667)**  
2601 CAAACCGCTATCCAGGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCA

2701 TAAGGTCATGTA CTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTA CTGCAAG  
 2801 TGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGG

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2901 GGTCGTTGGGCGGT CAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGG  
 3001 AACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGA  
 3101 CAGGACTATAAAGATACCAGGCGTTTTCCCCTGGAAGCTCCCTCGTGCGTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCC

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3201 TTCGGGAAGCGTGGCGCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTT  
 3301 CAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTA  
 3401 GCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAA  
 3501 GCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAACCCACCGCTGGTAGCGGTGGTTTTTTTGGTTGCAAGCAGCAGATTACGGCG

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3601 AGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTT

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3701 AATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTGGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCAT  
 3801 CAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTGTCCCAAGTCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA