



**PvuI (7)**  
**SgfI (6)** **EcoNI (96)**  
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

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**Psp1406I (203)** **HindIII (245)** **Bsu36I (291)**  
**PvuII (239)** **EcoNI (287)**  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC  
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGCTTTTGTTCGTTT

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**NcoI (560)**  
**BstEII (555)**  
**AgeI (552)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCCCTACCTGAGATCACCGGTCACCATGGCTTGCAATTGTCAGTTGATGCAGGATACACCACT  
601 CCTCAAGTTTCCATGTCCAAGGCTCATTCTTCTTTGTGCTGATTGCTGTTTCCACAAGTGTCTTCAGATGTTGATGAACAACCTGTTCAAGTCAGTG  
13▶ L K F P C P R L I L L F V L L I R L S Q V S S D V D E Q L S K S V

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**BspHI (738)**  
701 AAAGATAAGGTATTGCTGCCTTGCCGTTACAACCTCTCCTCATGAAGATGAGTCTGAAGACCGAATCTACTGGCAAAAACATGACAAAAGTGGTGTCTG  
47▶ K D K V L L P C R Y N S P H E D E S E D R I Y W Q K H D K V V L S  
801 TCATTGCTGGAAACTAAAAGTGTGGCCGAGTATAAGAACCGGACTTTATATGACAACTACTACTCTTATCATCTGGGCTGTGCTCCTTTCCAG  
80▶ V I A G K L K V W P E Y K N R T L Y D N T T Y S L I I L G L V L S D

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**PvuII (912)**  
901 CCGGGGCACATACAGCTGTGTCGTTCAAAGAAGGAAAGAGGAACGTATGAAGTTAAACACTTGGCTTTAGTAAAGTTGTCATCAAAGCTGACTTCTCT  
113▶ R G T Y S C V V Q K K E R G T Y E V K H L A L V K L S I K A D F S

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**PstI (1031)**  
1001 ACCCCCAACATAACTGAGTCTGAAACCCATCTGCAGACACTAAAAGATTACCTGCTTTGCTTCCGGGGGTTTCCCAAAGCCTCGTCTCTTGTGGTGG  
147▶ T P N I T E S G N P S A D T K R I T C F A S G G F P K P R F S W L

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**BamHI (1143)** **BsrGI (1160)**  
1101 AAAATGGAAGAGAATTACCTGGCATCAATACGACAATTTCCAGGATCCTGAATGTACACCATAGTAGCCAACTAGATTTCAATACGACTCG  
180▶ E N G R E L P G I N T T I S Q D P E S E L Y T I S S Q L D F N T T R

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**BbrPI (1240)**  
1201 CAACCACACCATTAAGTGTCTCATTAAATATGGAGATGCTCAGGTGTGACAGGACTTACCTGGGAAAAACCCCAAGAACCTCCTGATAGCAAGAAC  
213▶ N H T I K C L I K Y G D A H V S E D F T W E K P P E D P P D S K N  
1301 ACACCTGTGCTCTTTGGGGCAGGATTCGGCGCAGTAATAACAGTGTGCTGTCATCGTTGTCATCATCAAATGCTTCTGTAAGCACAGAAGCTGTTTCAGAA  
247▶ T L V L F G A G F G A V I T V V V I V V I I K C F C K H R S C F R

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**MscI (1489)**  
**NheI (1483)**  
1401 GAAATGAGGCAAGCAGAGAAACAACAACAGCCTTACCTTCGGGCTGAAGAAGCATTAGCTGAACAGACCGTCTTCTTTAGGCTAGCTGGCCAGACAT  
280▶ R N E A S R E T N N S L T F G P E E A L A E Q T V F L •  
1501 GATAAGATACATTGATGAGTTTGGACAAACCACAACACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACC

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**HpaI (1621)**  
1601 ATTATAAGCTGCAATAAACAAGTTAAACAACAACAAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGGAGGTGGGAGGTTTTTAAAGCAAGTAAAACC

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**EcoRI (1717)**  
1701 TCTACAAATGTGGTATGGAATTCAAAAACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCA

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**SapI (1899)**  
1801 TAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTCCCAAGGTTTGAAGTAC

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**SspI (1956)** **SwaI (1970)**  
1901 CTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAA

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**EcoO109I (2031)**  
2001 TGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTG  
2101 GACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGA  
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

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**SacI (2231)** **BstXI (2260)**  
2201 GCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTG  
116▶ 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 E D S Y P H

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**StuI (2395)**  
2301 CCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTACGACAGACAGTACCCTGCCAATGTAGGCC  
83▶ 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 R G I Y A  
2401 TCAATGTGGACAGCAGAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCCGACATGGTGTGTTGCTCATAGAGCATGGTGTCTTCTCAGTGG  
49▶ 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 T I K E T A

BspHI (2545)

XmnI (2537)

2501 CGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCG  
16 V E V L E L D Q Q S I N F T K M

AseI (2603) SacI (2660)

2601 ATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCTACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACC

SpeI (2758)

2701 GCCCATTTCGCTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGA

SnaBI (2886)

2801 CTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACT

NdeI (2991)

2901 GCCAAGTAGGAAAGTCCCATAAGGTCATGTAAGTCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATA

3001 CACTTGATGTAAGTCCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATT

PstI (3170) PacI (3177)

SdaI (3169) BspLU11I (3187)

3101 ATTGACGTCAATGGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCGAGTTAAATTAAGAACATGTGAGCAAA  
AGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGT

3201

3301 CAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGCGCTCTCTGTCCGACCCTGCCGCTTACCGGAT

3401 ACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCTCCAAGCTGGGCTG

ApaLI (3501)

3501 TGTGCACGAACCCCGTTCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCA

3601 GCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGTACACTAGAAGAACAGTATTTG

3701 GTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTGTTTG

3801 CAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCTTTGATCTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACTCACGTTAAGGG

EagI (3937) PacI (3917) SmaI (3926) NotI (3936)

3901 ATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTA

4001 ACTAACATACGCTCTCCATCAAACAAACGAAACAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGA

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