



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

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCCCTACCTGAGGCC  
 301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

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**KasI (535)**
**NcoI (560)** **BstEII (555)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTACCATTGGCTGCAGCTTGGACCGTGGTGTCTGGTACTTTGGT  
1▶ M A A A W T V V L V T L V

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**NheI (699)**

601 GCTAGGCTTGGCCGTGGCAGGCCCTGTCCCACTTCCAAGCCACCACAACCTGGGAAGGGTGCACATTGGCAGGTTCAAATCTGTCTACCCACAGGAG  
 13▶ L G L A V A G P V P T S K P T T T G K G C H I G R F K S L S P Q E

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**XcmI (719)**
**BbsI (775)** **Bsu36I (795)**

701 CTAGCGAGCTTCAAGAAGGCCAGGGACGCTTGGAAAGTCACTCAAGCTGAAAACTGGAGTTGCAGCTCTCTGTCTTCCCGGGAATTGGGACCTGA  
 47▶ L A S F K K A R D A L E E S L K L K N W S C S S P V F P G N W D L  
 801 GGCTTCTCCAGGTGAGGGAGCGCCTGTGGCCTTGAGGCTGAGCTGGCCTGACGCTGAAGTCTTGAGGGCGCTGTGGCCAGCCCTGGAGGACGT  
 80▶ R L L Q V R E R P V A L E A E L A L T L K V L E A A A G P A L E D V

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**XmaI (781)**

901 CCTAGACCAGCCCTTACACCCCTGCACCACATCTCTCCAGCTCCAGGCCTGTATCCAGCCTCAGCCACAGCAGGGCCAGGCCCGGGCCGCCTC  
 113▶ L D Q P L H T L H H I L S Q L Q A C I Q P Q P T A G P R P R G R L  
 1001 CACCACTGGCTGCACCGCTCCAGGAGGCCCAAAAAGGAGTCCGCTGGCTGCCTGGAGGCATCTGTACCTTCAACCTCTTCCGCCTCCTCACGGAG  
 147▶ H H W L H R L Q E A P K K E S A G C L E A S V T F N L F R L L T R

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**StuI (947)** **Bsp120I (976)**

1101 ACCTCAAATATGTGGCCGATGGGAACCTGTGTCTGAGAAGCTCAACCCACCCTGAGTCCACCTGACACCCACACCTTATTTATGCGTGAGCCGAATTC  
 180▶ D L K Y V A D G N L C L R T S T H P E S T •

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**EcoRI (1194)**

1201 GCTAGCTCGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGC

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**HpaI (1363)** **MfeI (1374)**

1301 TTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAAACAACATTCATTATTTATGTTTCAGG

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**EcoRI (1459)**

1401 TTCAGGGGAGGTGTGGGAGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTCTAAAATACAGCATAGCAAACTTTAACCTCCAAAT  
 1501 CAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCA

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**SspI (1698)**

1601 TGGAGTTTAAAGATATAGTGTATTTTCCAAGGTTTGAAGTCTTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAA

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**SwaI (1712)**

1701 TATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTA  
 1801 GTAGTTGGACTTAGGAAACAAAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTT  
141▶ • N R T Y K L P I L E

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**SacI (1973)**

1901 CCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCT  
 130▶ 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 P S

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**BstXI (2002)**

2001 GACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATG  
 97▶ 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 G I

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**StuI (2137)**

2101 GCAATGGCTTCAGCACAGACAGTACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCACTTGGTCTGTATGCCCAGCCCGACAT  
 63▶ 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 G V H

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**BspHI (2287)** **BbsI (2283)**

2201 GGTGCTTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCT  
**XmnI (2279)**

30▶ 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

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**AseI (2345)**

2301 CCTATAGTGAAGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTATCTGACGGTTCACCTA

SacI (2402)  
2400 AACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATT

SpeI (2500)  
2500 TACTAGTCAAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAA  
←

SnaBI (2628)  
Eco105I (2628)  
2599 CCGCATCATCATGGTAATAGCGTAGTAATAACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCAT

NdeI (2733)  
2699 TTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTC  
2799 AATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGGCGGGTCTTTGGGCGGTACGCCAGGCGGGCCATTACCGT

PstI (2912) PciI (2929)  
SdaI (2911) PacI (2919) BspLU11I (2929)  
2899 AAGTTATGTAACGCCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCA  
←  
2997 TAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGA  
3097 AGCTCCCTCGTGCCTCTCTGTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCTCAGCGCT

ApaLI (3243)  
3197 GTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCG  
3297 TCTTGAGTCCAACCCGGTAAACACGACTTATCGCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTC  
3397 TTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTT  
3497 GATCCGGCAAACAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTT

EagI (3679)  
PacI (3659) SmaI (3668) NotI (3678)  
3597 TTCTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATA  
3696 TCTTTATTTTTCATTACATCTGTGTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAT  
3796 AGGCTGTCCCGAGTCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA