



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

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAGGTGGCGGGGTAACGGAAAGTGATGTCGTGACTGGTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTCACGCGCCCGCCGCTACCTGAGGCC  
 301 GCCATCCACGCGGTTGAGTGCCTGTTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

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**KasI (535)**
**AgeI (552)** **BspLU11I (560)**

501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCAACATGTCCTCTGAAGAAGGAAAGCTCTTCGTGGGAGGGCT  
1▶ M S S E E G K L F V G G L

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**BbsI (628)**

601 CAACHTTAACACCGACGAGCAGGCACTGGAAGACCCTCAGCAGTTTCGGACCTATCTCTGAGTGGTCTGTCAAGGACCGGGAGACTCAGCGGTCC  
 13▶ N F N T D E Q A L E D H F S S F G P I S E V V V V K D R E T Q R S

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**SphI (735)**

701 AGGGGTTTTGTTTCATCACCTTACCAACCCAGAGCATGCTTCAGTTGCCATGAGAGCCATGAACGGAGAGTCTCTGGATGGTCTCAGATCCGTGTGG  
 47▶ R G F G F I T F T N P E H A S V A M R A M N G E S L D G R Q I R V

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**NcoI (849)**

801 ATCATGCAGGCAAGTCTGCTCGGGGAACAGAGGAGTGGCTTTGGGCCCATGGGCGTGGTGCAGCTACTCTAGAGTGGTGGGGACCAGGGCTATGG  
 80▶ D H A G K S A R G T R G G G F G A H G R G R S Y S R G G G D Q G Y G

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**Bsp120I (845)**
**XbaI (871)**

901 GAGTGGCAGGTATTATGACAGTCGACCTGGAGGTATGGATATGGATATGGACGTTCCAGAGACTATAATGGCAGAAACCAGGGTGGTTATGACCGCTAC  
 113▶ S G R Y Y D S R P G G Y G Y G Y G R S R D Y N G R N Q G G Y D R Y

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**MscI (1058)**

1001 TCAGGAGAAATTACAGAGACAATTATGACAACTGAAATGAGACATGCACATGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTGGACAAACC  
 147▶ S G G N Y R D N Y D N •

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**HpaI (1190)**

1101 ACAACTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACA

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**MfeI (1201)**
**EcoRI (1286)**

1201 ACAATTGCATTCATTTTATGTTTCAGGTTACAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATCTAAAATAC  
 1301 AGCATAGCAAACCTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATT  
 1401 AGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGTTTGAAGTACTGCTCTTCATTTCTTTATGTTTTAAATGCACTG

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**SspI (1525)**
**SwaI (1539)**

1501 ACCTCCACATTCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCA

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**EcoO109I (1600)**

1601 AGGCCCTTCATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGACTTCTAGCTTTAGT  
141▶ • N

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1701 TCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGAT  
 139▶ 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 Y D S I

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**SacI (1800)**

1801 GAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCC  
 106▶ 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 D F D K

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**StuI (1964)**

1901 TGCCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGCCTGCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCCCAG  
 72▶ 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 E G T

2001 TCTTGGTCTGATGGCCGCCCGCATGGTCTTGTCTCATAGACATGGTGTCTTCTCAGTGGGACCTCCACAGCTCCAGATCCCTGCTGAGA  
 39▶ 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 D Q Q S

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**BspHI (2114)**

2101 GATGTTGAAGTCTTCATGATGGCCCTCTATAGTGTGATGCTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCG  
 6▶ I N F T K M

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**AseI (2172)**

2201 TCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTT

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**SacI (2229)**

2300 ACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAACTCCCAATTGACGTCAATGGGGTGGAGACTTGAAATCCCGTGAGTCAAACCGCTA

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**SpeI (2327)**

**SnaBI (2455)**

2399 TCCACGCCATTGATGTAAGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTACTGCCAAGTAGGAAAGTCCCATAGGTCATG

**NdeI (2560)**

2499 TACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTAAGTACTGCCAAGTGGGCAGTTT

2599 ACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGG

**PstI (2739)**

**SdaI (2738)** PacI (2746)

BspLU11I (2756)

2699 CGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAA

2797 AAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTA

2897 TAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAA

**ApaLI (3070)**

2997 GCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCCAGCCGA

3097 CCGCTGCGCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCG

3197 AGGTATGTAGGCGGTGTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTA

3297 CCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAA

PacI (3486) SwaI (3495)

3397 AGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAAGGAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACA

**EagI (3506)**

**NotI (3505)**

3497 TTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAA

3597 AACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA