



**PvuI (7)**  
**SgfI (6)** 1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTGCTGTACTGGCTCCGCTTTTTCCCGAGGTTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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**HindIII (245)**  
**Psp1406I (203)** 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCCGCCGCTACCTGAGGGC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCCTGTGGTGCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**  
 401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTGTTTCGTTT

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**AgeI (552)** **BspLU11I (560)** **BbsI (598)**  
 501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACC GGCGCTACCTGAGATCACCGGTCAACATGTTCCAGATCCCAGAGTTT GAGCCGAGTGAGCAGGA

1▶ M F Q I P E F E P S E Q E

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**Bsp120I (627)**  
 601 AGACGCTAGTGCTACAGATAGGGCCTGGGCCCTAGCCTCACTGAGGACCAGCCAGGTCCTACCTGGCCCCAGGTCCTCTGGGGAGCAACATTCATCAG

13▶ D A S A T D R G L G P S L T E D Q P G P Y L A P G L L G S N I H Q

701 CAGGGACGGGAGCCACCAACAGTCATCATGGAGGCGAGGGCTATGGAGACTCGGAGTCGCCACAGTTCGTACCCAGCGGGGACCGAGGAGGATGAAG

47▶ Q G R A A T N S H H G G A G A M E T R S R H S S Y P A G T E E D E

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**EagI (876)**  
**Eco47III (869)**  
 801 GGATGGAGGAGGAGCTTAGCCCTTTTCGAGGACGCTCGGTTCCGGCTCCCCCAATCTCTGGGAGGCGAGCGCTACGGCCGTGAGCTCCGAAGGATGAG

80▶ G M E E E L S P F R G R S R S A P P N L W A A Q R Y G R E L R R M S

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**BstAPI (946)** **NgoMIV (976)**  
 901 CGATGAGTTT GAGGTTCTTCAAGGGACTTCTCGCCAAAGAGCGCAGGCACTGCAACACAGATGCGACAAAGCGCCGGCTGGACGCGCATTATCCAG

113▶ D E F E G S F K G L P R P K S A G T A T Q M R Q S A G W T R I I Q

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**MscI (1074)**  
**NheI (1068)**  
 1001 TCCTGGTGGGATCGAAACTTGGGCAAAGGAGGCTCCACCCCTCCAGTGATCTTCTGCTCCACATCCGCTAGCTGGCCAGACATGATAAGATACATTGA

147▶ S W W D R N L G K G G S T P S Q •

1101 TGAGTTTGACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAAT

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**HpaI (1206)** **MfeI (1217)**  
 1201 AAACAAGTTAAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTA

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**EcoRI (1302)**  
 1301 TGGAAATCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCT

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**SapI (1484)**  
 1401 GTTGCCAATGTGCATTAGCTGTTTGAGCCTCACCTTCTTTCATGAGGTTTAAAGATATAGTGATTTTCCCAAGGTTTGAAGTACTGCTTTCATTTCTTTA

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**SspI (1541)** **SwaI (1555)**  
 1501 TGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAAATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGC

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1601 AGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCG

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1701 AGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAG

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

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**BstXI (1845)**  
 1801 GAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAAT

111▶ 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 R V A V I

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**StuI (1980)**  
 1901 GGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCAATGGCAATGGCTTTCAGCAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCA

78▶ 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 E I H V A

2001 GAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCCGACATGGTGTCTGTTGCTCATAGAGCATGGTGTCTCTCAGTGGCGACCTCCACCAGCT

44▶ 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 V E V L E

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**BbsI (2126)**  
**XmnI (2122)** 2101 CCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAA

11▶ L D Q Q S I N F T K M

2201 AACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAA

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**AseI (2188)**  
**SpeI (2343)**  
 2301 TGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAACAACTCCCATTTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGT

2401 GAGTCAAACCGCTATCCACGCCATTGATGTAAGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTACTGCCAAGTAGGAAAGT

**SnaBI (2471)**

2501 CCCATAAGGTCATGTAAGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGTACTGCT

**NdeI (2576)**

2601 CAAGTGGGCGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGG

PacI (2762)

**PstI (2755)**

**SdaI (2754)**

BspLU11I (2772)

2701 CGGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAGGCCAGCAAAGGC

2801 CAGGAACCGTAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAAC

2901 CCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGGCTCTCCTGTTCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTC

**ApaLI (3086)**

3001 TCCCTTCGGGAAGCGTGGCGTTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCC

3101 CGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGG

3201 ATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGC

3301 TGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTTTGATCCGGCAAACAACACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTAC

3401 GCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTACGGGGTCTGACGCTCAGTGAACGAAAACTCACGTTAAGGGATTTTGGTCATGGCT

EagI (3522)

PacI (3502) SmaI (3511) **NotI (3521)**

3501 AGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAACTAACATACGCTCT

3601 CCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA