



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

1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAAGTATGTCGTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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**HindIII (245)**
**Bsu36I (291)**

201 **Psp1406I (203)** GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCGCCCTACCTGAGGGC

301 **PvuII (239)** GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

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**AgeI (552)**
**BspLU11I (560)**

501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCTACCTGAGATCACCGTCAACATGTGTGTCAAAAGGCTTCCCTACCTATGCTTAGTCC

1▶ M C V T K A S L P M L S P

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**HindIII (682)**

601 CACAGGCAGCCCGCAGGAGGTAGAAGTGGTAAAATCTCCAAGAAAAAGGCACGGAACCATCTCCCCTGAGTCTTGCTAAGCTTTACTGCTACTAT

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

701 GGAGTGATCATGGTCTCACTGTAGCTGAATTGCTCTTTCTGTTGCTTTGTGAGCAACAAAGACAGAACAGATCCCAGTCAACAAGACCTATGCTGCTT

47▶ G V I M V L T V A V I A L S V A L S A T K T E Q I P V N K T Y A A

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**BstXI (853)**
**StuI (875)**

801 GCCCGAAAACCTGGATTGGAGTTGAAAATAAATGTTTTATTTTTCTGAATACCCCAAGTAAGTGGACATTCGCCAGGCTTCTGCATGGCACAAGAGGC

80▶ C P Q N W I G V E N K C F Y F S E Y P S N W T F A Q A F C M A Q E A

901 CCAACTAGCTCGTTTTGACAACCAGGATGAGCTGAATTTCTAATGAGATAACAAGCGAATTTTATTGCTGATTGGCTGCACAGAGAGTCTGAGAG

113▶ Q L A R F D N Q D E L N F L M R Y K A N F D S W I G L H R E S S E

1001 CACCCTTGAAGTGGACAGACAACACTGAGTATAACAACAGATCCCATCCGGGAGAGGAAAGATTTGCCTACCTGAACAACAACGGGATCAGCAGTA

147▶ H P W K W T D N T E Y N N T I P I R G E E R F A Y L N N N G I S S

1101 CCAGGATCTATTCACCTCGGATGTGGATCTGTAGCAAGCTCAACAGCTATAGCCTCCACTGCCAAACTCCTTTTTTCTTCTAGCATTACCAAGAGA

180▶ T R I Y S L R M W I C S K L N S Y S L H C Q T P F F P S •

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**MscI (1218)**  
**NheI (1212)**

1201 CGCTTTTATAGCCGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAA

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**HpaI (1350)**
**MfeI (1361)**

1301 TTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACCAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGT

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**EcoRI (1446)**

1401 GTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTT

1501 GAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCAATGTGCATTAGCTGTTTGCAGCCTCACCTTTTCATGGAGTTAAGAT

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**SapI (1628)**
**SspI (1685)**
**SwaI (1699)**

1601 ATAGTGTATTTTCCCAAGGTTTGAACACTAGCTCTTCATTTCTTTATGTTTTAAATGCAGTACCTCCACATCCCTTTTTAGTAAAATATTCAGAAATAA

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**EcoO109I (1760)**

1701 TTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTA

1801 GGGAAACAAGAACCTTAAATAGAAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGCTGACTTGGGGGATGAGTTCCTCAATGGTGGT

141▶ • N R T Y K L P I L E E I T T

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**SacI (1960)**
**BstXI (1989)**

1901 TTTGACCAGCTTGCCATTCATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCATGCCACAGGGGCTGACCACCTGATG

126▶ 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 V V R I

2001 GATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCAGCAGACCAATGGCAATGGCTTCAG

92▶ 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 A I A E A

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**StuI (2124)**

2101 CACAGACAGTGACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTCTTGTGTC

59▶ 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 H K N D

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**BbsI (2270)**
**XmnI (2266)**

2201 CTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTC

26▶ 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 (2332)**
**SacI (2389)**

2301 GTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTT

**SpeI (2487)**

2401 ATATAGACCTCCCACCGTACACGCCTACGCCCATTTGCGTCAATGGGGCGGAGTTGTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACA



2501 AACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGT

**SnaBI (2615)**

2601 AATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACG

**NdeI (2720)**

2701 TCAATAGGGGGCGTACTTGCCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTA

**PstI (2899)**

**SdaI (2898)**

2801 TTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGGTCTGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCC

**Pacl (2906) BspLU111 (2916)**

2901 TGCAGGTTAATAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTG



3001 ACGAGCATCACAAAAATCGACGCTCAAGTCAGAGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCGTGGCGTC

3101 TCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCCG

**ApaLI (3230)**

3201 GTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCAGCCGACCCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGG

3301 TAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGTACAGAGTCTTGAAGTGGTGGCCTAA

3401 CTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAACAAACC

3501 ACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACG

**EagI (3666)**

**Pacl (3646) SwaI (3655) NotI (3665)**

3601 CTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAATATCTTTATTTTCATTACAT

3701 CTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAA

3801 GTGCAGGTGCCAGAACATTTCTCTATCGAA