



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

1 GGATCTGCATCGCTCCGGTGCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTATGTCGTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

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**HindIII (245)**

**Psp1406I (203)**
**PvuII (239)**
**Bsu36I (291)**

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

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**BstEII (555)**

**AgeI (552)**  
 501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCACCATGCTGTCACATCTCGTTCTCGTTTATCAGAAATAC

**Bsp120I (683)**

**EcoO109I (682)**

601 CAACGAGAGCGGTGAAGAAGTACCACCTTTTTGATTATGATTACGGTGCTCCCTGTATAAATTTGACGTGAAGCAAATGGGGCCCAACTCCTGCCT

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

701 CCGCTCTACTCGTGGTTCATCTTTGGTTTTGTGGGCAACATGCTGGTCTCCTCATCTTAATAAACTGCAAAAAGCTGAAGTCTGACTGACATTT

47▶ P L Y S L V F I F G F V G N M L V V L I L I N C K K L K C L T D I

**MscI (812)**

801 ACCTGCTCAACCTGGCCATCTCTGATCTGCTTTTTCTTACTCTCCATTGTGGGCTCACTCTGCTGCAAATGAGTGGGTCTTTGGGAATGCAATGTG

80▶ Y L L N L A I S D L L F L I T L P L W A H S A A N E W V F G N A M C

**ClaI (967)**

901 CAAATTATTCACAGGGCTGTATCACATCGGTTATTTGGCGGAATCTTCTCATCATCTCCTGACAATCGATAGATACTGGCTATTGTCCATGCTGTG

113▶ K L F T G L Y H I G Y F G G I F F I I L L T I D R Y L A I V H A V

**BstEII (1020)**

1001 TTTGCTTTAAAAGCCAGGACGGTACCTTTGGGGTGGTGACAAGTGTGATCACCTGGTGGTGGCTGTGTTTGCTTGTCCCAGGAATCATCTTTACTA

147▶ F A L K A R T V T F G V V T S V I T W L V A V F A S V P G I I F T

1101 AATGCCAGAAAGAAGATTCTGTTTATGTCTGTGGCCCTATTTTCCACGAGGATGGAATAATTTCCACACAATAATGAGGAACATTTGGGGCTGGTCT

180▶ K C Q K E D S V Y V C G P Y F P R G W N N F H T I M R N I L G L V L

1201 GCCGCTGCTCATGTTGCTGCTACTCGGAATCCTGAAAACCCTGCTTCGGTGTGAAACGAGAAGAAGAGGCATAGGCAGTGAGAGTCATCTTC

213▶ P L L I M V I C Y S G I L K T L L R C R N E K K R H R A V R V I F

**BspHI (1304)**
**SspI (1339)**
**EcoRI (1369)**

1301 ACCATCATGATTGTTTACTTTCTTCTGGACTCCCTATAATATTGTCATTCTCTGAACACCTCCAGGAATCTTCCGGCCTGAGTAACTGTGAAAGCA

247▶ T I M I V Y F L F W T P Y N I V I L L N T F Q E F F G L S N C E S

1401 CCAGTCAACTGGACCAAGCCACGAGGTGACAGAGACTCTGGGATGACTCACTGCTGCATCAATCCCATCATCTATGCCTTCGTTGGGGAGAAGTTCAG

280▶ T S Q L D Q A T Q V T E T L G M T H C C I N P I I Y A F V G E K F R

**Eco47III (1538)**

1501 AAGGTATCTCTCGGTGTTCTTCCGAAAGCACATCACCAAGCGCTTCTGCAAACAATGTCCAGTTTTCTACAGGGAGACAGTGGATGGAGTGACTTCAACA

313▶ R Y L S V F F R K H I T K R F C K Q C P V F Y R E T V D G V T S T

**BsaBI (1680)**

1601 AACACGCCTTCCACTGGGAGCAGGAAGTCTCGGCTGGTTTATAAAACGAGGAGCAGTTTGATTGTTGTTTATAAAGGGAGATAACAATCTGTATATAAC

347▶ N T P S T G E Q E V S A G L •

**MscI (1756)**

**NheI (1750)**

1701 AACAAACTCAAGGGTTTGTGAACAATAGAAACCTGTAAAGCAGGTGCCCTAGTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCA

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**HpaI (1888)** **MfeI (1899)**

1801 AACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAAC

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**EcoRI (1984)**

1901 AATTGCATTCATTTTATGTTTCAGGTTCCAGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAG

2001 CATAGCAAACCTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAG

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**SapI (2166)**

2101 CTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTCCCAAGGTTTGAAGTGTCTTCACTTTCTTATGTTTTAAATGCACTGAC

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**SspI (2223)**
**Swal (2237)**
**EcoO109I (2298)**

2201 CTCCCACATTCCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAAATAATGTTTTTATTAGGCAGAATCCAGATGCTCAAG

2301 GCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTTC

SacI (2498)

2401 CTGGTGTACTTGGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGA  
138 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 L  
2501 GCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCCTTCTG  
105 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 Q

**StuI (2662)**

2601 CCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTC  
72 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 I E G T  
2701 TTGGTCTGATGGCCGCCCGCATGGTGCTTGTGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGA  
38 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 I

**BbsI (2808)** **AseI (2870)**

2801 TGTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTC  
5 N F T K M

**SacI (2927)**

2901 TCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTGCGTCAATGGGGCGGAGTTGTTACG

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**SpeI (3025)**

3001 ACATTTTGAAAGTCCCCTTATGTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCTGAGTCAAACCGCTATCCA

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**SnaBI (3153)**

3101 CGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACT

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**NdeI (3258)**

3201 GGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACTTGATGTACTGCCAAGTGGGAGTTTACCG  
3301 TAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGGTCTGTTGGGCGGT

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**PacI (3444)**

**PstI (3437)** **BspLUIII (3454)**  
**SdaI (3436)**

3401 CAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAGGC  
3501 CGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGA  
3601 TACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTCGGAAGCGTGG

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**ApaLI (3768)**

3701 CGCTTTTCATAGCTCACGCTGTAGGTATCTCAGTTCCGGTGTAGGTGCTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCGCTG  
3801 CGCCTTATCCGGTAACTATCGTCTTGAGTCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTAT  
3901 GTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTCG  
4001 GAAAAAGAGTTGGTAGCTCTTGATCCGGCAACAACACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATC

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**PacI (4184)** **SwaI (4193)**

4101 TCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAA

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**EagI (4204)**  
**NotI (4203)**

4201 TCAGCGGCCGAATAAAATATCTTTATTTTATTACATCTGTGTGGTTTTTTTTGTGTAATCGTAACATAACGCTCTCCATCAAACAAAACGAA  
4301 ACAAAAACAACTAGCAAAATAGGCTGTCCCGAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA