



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

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTACGCGCCCGCCGCTACCTGAGGCC

301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCCTCCCGCCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGTCAAGTGCAGGCC

**NgoMIV (441)**  
**NgoMI (441)**  
**NaeI (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

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

501 TCTGTTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTGTCATGACTTGCAAAATGTCGCAGCTGGAACGCAACATAGA

1▶ M T C K M S Q L E R N I E  
**EcoRI (667)**
**BglII (690)**

601 GACCATCATCAACACCTTCCACCAATACTCTGTGAAGCTGGGGCACCAGACACCTGAACAGGGGGAATTCAAAGAGCTGGTGCAGAAAAGATCTGCAA

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

701 AATTTTCTCAAGAAGGAGAATAAGAATGAAAAGGTCATAGAACACATCATGGAGGACCTGGACACAAATGCAGACAAGCAGCTGAGCTTCGAGGAGTTCA

47▶ N F L K K E N K N E K V I E H I M E D L D T N A D K Q L S F E E F

**StuI (882)**  
**Bsp120I (858)**
**Eco147I (882)**

801 TCATGCTGATGGCAGGCTAACCTGGGCCTCCACGAGAAGATGCACGAGGGTGCAGAGGGCCCTGGCCACCACCATAAGCCAGGCCTCGGGGAGGGCAC

80▶ I M L M A R L T W A S H E K M H E G D E G P G H H K P G L G E G T

**NheI (926)**

901 CCCCTAAGACCACAGTGGCAAGATCGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATG

113▶ P •

**HpaI (1064)**
**MfeI (1075)**

1001 CTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCTTTATGTTTCAG

**EcoRI (1160)**

1101 GTTCAGGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCAAA

1201 TCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGCAGCCTCACCTCTTTC

**SspI (1399)**

1301 ATGGAGTTAAGATATAGTGTATTTTCCCAAGTTTGAAGTACTCTTCTTTATTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTATGATAAA

**Swal (1413)**

1401 ATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTT

1501 AGTAGTTGACTTAGGGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGT

141▶ • N R T Y K L P I L  
**SacI (1674)**

1601 TCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGC

130▶ 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 E R C M G C P S

1701 TGACCACCCTGATGGATCTGCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAAT

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

**StuI (1838)**  
**Eco147I (1838)**

1801 GGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACA

64▶ 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

**BspHI (1988)**  
**XmnI (1980)**

1901 TGGTCTGTTGCTCATAGAGCATGGTGTCTCTCAGTGGCGACCTCCACCAGTCCAGATCTGCTGAGAGATGTTGAAGTCTTTCATGATGGCCC

30▶ 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 N F T K M

**VspI (2046)**  
**AseI (2046)**

2001 TCCTATAGTGAGTCGATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTA

**SacI (2103)**

2101 AACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATT

**SpeI (2201)**

2201 TACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGAGACTTGAAAATCCCCGTGAGTCAAACCCTATCCACGCCATTGATGTAAGTCCAAAA

**SnaBI (2329)**  
**Eco105I (2329)**

2300 CCGCATCATCATGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTAAGTGGGCATAATGCCAGGCGGGCCAT

NdeI (2434)

2400 TTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTAAGTGGCAGTTTACCGTAAATACTCCACCCATTGACGTC

2500 AATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGCGGGGGTCTGTTGGCGGTCAGCCAGGCGGGCCATTACCGT

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PstI (2613)  
SdaI (2612) PacI (2620) BspLU11I (2630)

2600 AAGTTATGTAACGCCCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCA

2698 TAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGA

2798 AGCTCCCTCGTGCCTCTCTGTCCGACCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCAGCT

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ApaLI (2944)

2898 GTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTTCAGCCGACCGCTGCGCCTTATCCGGTAACTATCG

2998 TCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTC

3098 TTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGATTGGTAGCTCTT

3198 GATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTT

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EagI (3380)  
PacI (3360) SwaI (3369) NotI (3379)

3298 TTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATAT

3398 CTTTATTTTCATTACATCTGTGTGTTGGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAAACAAAACGAAAACAAAACAACTAGCAAATA

3498 GGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA