



**PvuI (7)**  
**SgfI (6)** 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
**MfeI (82)** **EcoNI (96)**  
101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)**  
**Psp1406I (203)** 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC  
**PvuII (239)** **Bsu36I (291)**  
301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCCTACCTAGACTCAGCCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

**KasI (535)** **AgeI (552)** **BspHI (560)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCATCATGAAGTTCCTCTGCAAGAGACTTCCATCCAGTTGC  
1▶ M K F L S A R D F H P V A

**BspEI (650)**  
601 CTTCTGGGACTGATGCTGGTGACAACCACGGCCTTCCCTACTTCACAAGTCCGGAGGAGACTTCACAGAGGATACCCTCCCAACAGACCTGTCTAT  
13▶ F L G L M L V T T T A F P T S Q V R R G D F T E D T T P N R P V Y

**BspLU11I (729)**  
701 ACCACTTCACAAGTCGGAGGCTTAATTACACATGTTCTCTGGGAAATCGTGGAAATGAGAAAAGAGTTGTGCAATGGCAATTCTGATTGTATGAACAACG  
47▶ T T S Q V G G L I T H V L W E I V E M R K E L C N G S D C M N N  
801 ATGATGCACCTTGCAGAAAACAATCTGAAACTTCCAGAGATACAAAAGATGATGGATGTACCAAAGTGGATATAAGTCAAGAAAATTTGCCATTGAAAAT  
80▶ D D A L A E N N L K L P E I Q R N D G C Y Q T G Y N Q E I C L L K I

**BbsI (908)**  
901 TTCCTCTGGTCTTCTGGAGTACCATAGCTACCTGGAGTACATGAAGAACAACCTAAAAGATAACAAGAAAGACAAAGCCAGAGTCCCTCAGAGAGATACA  
113▶ S S G L L E Y H S Y L E Y M K N N L K D N K K D K A R V L Q R D T  
1001 GAAACTTAATTCATATCTTCAACCAAGAGGTAAGATTTACATAAAAATAGCTTCTACCCAATTTCCAATGCTCTCCTAAAGATAAGCTGGAGT  
147▶ E T L I H I F N Q E V K D L H K I V L P T P I S N A L L T D K L E

**XmnI (1153)** **BglII (1177)**  
1101 CACAGAAGGAGTGGCTAAGGACCAAGACCATCCAATTCATCTTGAATCACTTGAAGAATTTCTAAAAGTCACTTTGAGATCTACTCGGCAAACCTAGTG  
180▶ S Q K E W L R T K T I Q F I L K S L E E F L K V T L R S T R Q T •

**MscI (1244)** **NheI (1238)**  
1201 CGTTATGCCTAAGCATATCAGTTTGTGGACATTCCTCAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCA

**HpaI (1376)** **MfeI (1387)**  
1301 GTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAACAAACAATTGCATTCAT

**EcoRI (1472)**  
1401 TTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTTAAAATACAGCATAGCAAACCT  
1501 TTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCC

**SapI (1654)**  
1601 TCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTGCTTCTCATTCTTTATGTTTTAAATGACTGACCTCCACATTCC

**SspI (1711)** **SwaI (1725)** **EcoO109I (1786)**  
1701 CTTTTTAGTAAAAATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAAT  
1801 ATCCCCAGTTTAGTAGTTGACTTAGGGAACAAAGAACCTTAAATAGAAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGT  
141▶ • N R T Y K

**SacI (1986)**  
1901 AGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACA  
134▶ 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 E R C M

**BstXI (2015)**  
2001 TGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCAC  
101▶ 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 G N S V

**StuI (2150)**  
2101 AGCAGACCAATGGCAATGGCTTCAGCAGACAGTACCCTGCCAATGTAGGCCCTAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATG  
68▶ 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 K T R I

**BbsI (2296)** **XmnI (2292)**  
2201 GCCGCCCCGACATGGTGTGTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCT  
34▶ 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 N F T K

**AseI (2358)**  
2301 TCATGGTGGCCCTCTATAGTGAAGTCTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCT  
14 M

**SacI (2415)**  
2401 GACGGTTCATAAACGAGCTCTGCTTATATAGACTCCACCGTACACGCTACCGCCATTTGGCTCAATGGGGCGGAGTTGTTACGACATTTTGAAA

2501 **SpeI (2513)**  
GTCCCGTTGATTTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATG

2601 **SnaBI (2641)**  
TACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCCATAAGGTCATGTACTGGGCATAATGCC

2701 **NdeI (2746)**  
AGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCAC

2801  
CCATTGACGTCAATGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGG

2901 **PstI (2925)** **PacI (2932)** **SdaI (2924)** **BspLU11I (2942)**  
CCATTTACGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACTGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGCTGGC

3001  
GTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTT

3101  
CCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATA

3201 **ApaLI (3256)**  
GCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTACGCCGACCCTGCGCCTTATCCGG

3301  
TAACTATCGTCTTGAGTCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCT

3401  
ACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTG

3501  
GTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCC

3601 **EagI (3692)** **PacI (3672)** **SwaI (3681)** **NotI (3691)**  
TTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGA

3701  
ATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAACAAACGAAACAAACAAACT

3801  
AGCAAAATAGGCTGTCCCCAGTGC AAGTGCAGGTGCCAGAACATTTCTCTATCGAA