



**PvuI (7)**  
**SgfI (6)**  
1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA  
101 GAGAAAGTGGCGCGGGTAAACTGGAAAAGTATGTCGTGACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)**  
**Psp1406I (203)** **PvuII (239)** **Bsu36I (291)**  
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTCACGCGCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTCTCAACTCTACGCTTTTGTTCGTTT

**BstEII (555)** **BbsI (565)**  
**AgeI (552)** **NcoI (560)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGATCACCGGTACCATGGAAGACAATAATATGTTACCTCAGTTCATCCACGG  
601 CATACTATCAACATCTCATTCTCTATTTACACGAAGTATCCAAGAGCTTGATGAAGGGGCCACACACCGTATGACTACGATGATGGTGAACCTTGTGCAT  
13▶ I L S T S H S L F T R S I Q E L D E G A T T P Y D Y D D G E P C H  
1▶ M E D N N M L P Q F I H G

**BamHI (728)** **BspLU11I (779)**  
701 AAAACAGTGTGAAGCAAATTGGAGCTTGGATCCTGCCCTCACTCCCTGGTATTCATCTTTGGTTTTGTGGCAACATGTTGGTCATTATAATTC  
47▶ K T S V K Q I G A W I L P P L Y S L V F I F G F V G N M L V I I I

**EcoRV (832)**  
**BsaBI (832)** **MscI (851)**  
801 TGATAGGCTGTA AAAAGCTGAAGAGCATGACTGATATCTATCTGCTCAACTTGGCCATCTCTGACCTGCTCTTCTGCTCACATTACCATTTCTGGGCTCA  
80▶ L I G C K K L K S M T D I Y L L N L A I S D L L F L L T L P F W A H  
901 CTATGCTGCAAATGAGTGGGCTTTGGGAATAAATGTGTAAGTATTCACAGGGCTCTACATTTGGTTATTTTGGTGAATCTTTTTATTATCTC  
113▶ Y A A N E W V F G N I M C K V F T G L Y H I G Y F G G I F F I I L  
1001 CTGACAATTGATAGGTACTTGGCTATTGTTCTGCTGTTTGTCTTAAAAAGCCAGGACAGTTACCTTTGGGGTGATAACAAGTGTAGTCACCTGGGTGG  
147▶ L T I D R Y L A I V H A V F A L K A R T V T F G V I T S V V T W V

**XcmI (1158)** **XmnI (1194)**  
1101 TGGCTGTGTTTGCCTCTCTACCAGGAATCATATTTACTAAATCCAAACAAGATGATCACCATTACACCTGTGGCCCTTATTTTACACAACATGGAAGAA  
180▶ V A V F A S L P G I I F T K S K Q D D H H Y T C G P Y F T Q L W K N

**EcoRI (1271)**  
1201 TTTCCAAACAATAATGAGAAATATCTTGAGCCTGATCTGCTCTACTTGTATGGTATCTGCTACTCAGGAATTCACACACCTGTTTCGCTGTAGG  
213▶ F Q T I M R N I L S L I L P L L V M V I C Y S G I L H T L F R C R

**BspHI (1343)** **SspI (1378)**  
1301 AATGAGAAGAAGAGGCACAGGGCTGTGAGGCTCATCTTTGCCATCATGATTGTCTACTTTCTCTTCTGACTCCATAAATATTGTTCTCTTCTTGACCA  
247▶ N E K K R H R A V R L I F A I M I V Y F L F W T P Y N I V L F L T

**AseI (1498)**  
1401 CCTCCAGGAATCCTTGGGAATGAGTAACTGTGTGATTGACAAGCACTTAGACCAGGCATGCAGGTGACAGAGACTCTTGGAAATGACACACTGCTGCAT  
280▶ T F Q E S L G M S N C V I D K H L D Q A M Q V T E T L G M T H C C I

**BstAPI (1586)**  
1501 TAATCCTGTCAATTTATGCCTTTGTTGGAGAGAAGTCCGAAGTATCTCTCCATATTTTTAGAAAAGCACATTGCTAAACGCTCTGCAAACAGTGCCCA  
313▶ N P V I Y A F V G E K F R R Y L S I F F R K H I A K R L C K Q C P  
1601 GTTTTCTATAGGGAGACAGCAGATCGAGTGAGCTCTACATTCACTCTTCCACTGGGGAGCAAGAGGTCTCGGTTGGGTTGTAAGTAAGTACAGGTTG  
347▶ V F Y R E T A D R V S S T F T P S T G E Q E V S V G L •

**MscI (1730)**  
**NheI (1724)**  
1701 CCTTTTTTAAGCAGGAAGGAGGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTGGACAACCACAAC TAGAATGCAGTGAAAAAATGCT

**HpaI (1862)**  
1801 TTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAAATTGCATTATTTATGTTTCAGGT

**EcoRI (1958)**  
1901 TCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCAAATC  
2001 AAGCCTCTACTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTTGACGCTCACCTCTTTTCAT

**SspI (2197)**  
2101 GGAGTTTAAGATATAGTGTATTTCCCAAGTTTGAAGTAGCTCTTCATTTCTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAA

**SwaI (2211)** **EcoO109I (2272)**  
2201 ATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTAG  
2301 TAGTTGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTT  
141▶ N R T Y K L P I L E

2401 CTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTG  
130 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  
BstXI (2501)

2501 ACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAGCAGACCCAATGG  
96 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 A  
StuI (2636)

2601 CAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATG  
63 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 H  
BbsI (2782)

2701 GTGCTTGTGTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGTCCAGATCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTC  
30 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  
XmnI (2778)

2801 CTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACGCTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAA  
AseI (2844)

2901 CGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTA  
SpeI (2999)

3001 CTAGTCAAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGTATCCACGCCATTGATGTACTGCCAAAACCG  
SnaBI (3127)

3101 CATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCACTGACTGGGCATAATGCCAGGCGGGCCATTTA  
NdeI (3232)

3201 CCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCCAAGTGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAAT  
NdeI (3232)

3301 GGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAAG  
PacI (3418)

3401 TTATGTAACGCTGCAGGTTAAITAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGC  
PstI (3411) SdaI (3410) BspLU11I (3428)

3501 TCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTCCCCTGGAAGCTC  
3601 CCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGG  
ApaI (3742)

3701 TATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCAGAACCCCGTTCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTG  
3801 AGTCCAACCCGGTAAGACACGACTTATGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTTCTTGAA  
3901 GTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCC  
4001 GGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTA  
EagI (4178)

4101 CGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTA  
PacI (4158) SmaI (4167) NotI (4177)

4201 TTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAAATAGGCTG  
4301 TCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA