



**PvuI (7)**  
**SgfI (6)** MfeI (82) EcoNI (96)  
1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)** **Bsu36I (291)**  
**Psp1406I (203)** **PvuII (239)** EcoNI (287)  
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)** **NaeI (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

**KasI (535)** **AgeI (552)** **BspHI (560)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCATCATGATTCCAGCAGTGGTCTTGTCTTACTCCTTTTGGT  
13 M I P A V V L L L L L L V

**SalI (692)**  
601 TGAACAAGCAGCGGCCCTGGGAGAGCCTCAGCTCTGCTATATCCTGGATGCCATCCTGTTTCTGTATGGAATTGTCTCACCCTCCTCTACTGTGCACTG  
13 E Q A A A L G E P Q L C Y I L D A I L F L Y G I V L T L L Y C R L  
701 AAGATCCAAGTGCAAAGGCAGCTATAACCAGCTATGAGAAATCAGATGGTGTTCACAGGGCCTGAGCACCAGGAACAGGAGACTTACGAGACTCTGA  
47 K I Q V R K A A I T S Y E K S D G V Y T G L S T R N Q E T Y E T L

**MscI (861)** **NheI (855)**  
801 AGCATGAGAAACCACACAGTAGCTTTAGAATAGATGCGGTCATATTCTTCTTTGGCTAGCTGCCAGACATGATAAGATACATTGATGAGTTTGACAA  
80 K H E K P P Q •

**HpaI (993)**  
901 ACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAAGTTAA

**MfeI (1004)** **EcoRI (1089)**  
1001 ACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTCAAAA  
1101 TACAGCATAGCAAACTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGC  
1201 ATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGGTTTGAAGTCTTTCATTTCTTTATGTTTTAAATGCA

**SspI (1328)** **SwaI (1342)**  
1301 CTGACCTCCACATTCCCTTTTTAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAAATAATGTTTTTTATTAGGCAGAATCCAGATGC

**EcoO109I (1403)**  
1401 TCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTT  
141 •

**SacI (1603)** **BstXI (1632)**  
1501 AGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCACTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGA  
140 N 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  
1601 GATGAGCTCTGCACATGCCACAGGGGCTGACCACCTGATGGACTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCC  
107 I L 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

**StuI (1767)**  
1701 TTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTTCAGCAGACAGTACCCTGCCAATGTAGGCTCAATGTGGACAGCAGAGATGATCTCCC  
73 K Q 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  
1801 CAGTCTTGGTCTGATGGCCGCCGACATGGTCTTGTGCTCCTCATAGAGCATGGTGTCTTCTCAGTGGCAGCTCCACCAGCTCCAGATCCTGCTG  
40 T 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

**BspHI (1917)** **BbsI (1913)** **XmnI (1909)** **AseI (1975)**  
1901 AGAGATGTTGAAGTCTTATGATGGCCCTCTATAGTGAAGTCTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATG  
7 S I N F T K M

**SacI (2032)**  
2001 GCGTCTCCAGCTATCTGACGGTCACTAAACGAGCTCTGTTATATAGACCTCCCACCGTACACGCTACCGCCATTGCGTCAATGGGGCGGAGTT

**SpeI (2130)**  
2100 GTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCG

**SnaBI (2258)**  
2199 CTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGTACTAATACGTAGTACTGCCAAGTAGGAAAGTCCATAAGGTC

**NdeI (2363)**  
2299 ATGTAAGTGGCATAATGCCAGGCGGCCATTTACCGTCAATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGTACTGCAAGTGGGCAG  
2399 TTTACCGTAAATACTCCACCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGAAACATACGTCAATTATTGACGTCAATGGGGGGGTCGTT

PstI (2542)

SdaI (2541) PacI (2549) BspLU11I (2559)

2499 GGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTG C A G G T T A A T T A A G A A C A T G T G A G C A A A A G G C C A G C A A A A G G C C A G G A A C C G

2597 T A A A A G G C C G C T T G C T G G C G T T T T T C C A T A G G C T C C G C C C C T G A C G A G C A T C A C A A A A T C G A C G C T C A A G T C A G A G G T G G C G A A A C C C G A C A G G A

2697 C T A T A A A G A T A C C A G G C G T T T C C C C T G G A A G C T C C C T C G T G C G C T C T C T G T T C C G A C C C T G C C G C T T A C C G G A T A C C T G T C C G C T T T C T C C C T T C G G

ApaLI (2873)

2797 G A A G C G T G G C G T T T C T C A T A G C T C A C G C T G T A G G T A T C T C A G T T C G G T G T A G G T C G T T C G T C C A A G C T G G G C T G T G T G C A C G A A C C C C C G T T C A G C C

2897 C G A C C G C T G C G C T T A T C C G G T A A C T A T C G T C T T G A G T C C A A C C C G T A A G A C A C G A C T T A T C G C C A C T G G C A G C A G C C A C T G G T A A C A G G A T T A G C A G A

2997 G C G A G G T A T G T A G G C G G T G C T A C A G A G T T C T T G A A G T G G T G G C C T A A C T A C G G C T A C T A G A A G A A C A G T A T T T G G T A T C T G C G C T C T G C T G A A G C C A G

3097 T T A C C T T C G G A A A A G A G T T G G T A G C T C T T G A T C C G G C A A A C A A A C C C G C T G G T A G C G G T G G T T T T T T G T T T G C A A G C A G C A G A T T A C G C G C A G A A A

PacI (3289)

3197 A A A A G A T C T C A A G A A G A T C C T T T G A T C T T T T C T A C G G G T C T G A C G C T C A G T G G A A C G A A A A C T C A C G T T A A G G G A T T T T G G T C A T G G C T A G T T A A T T A

EagI (3309)

SwaI (3298) NotI (3308)

3297 A C A T T T A A A T C A G C G G C C G C A A T A A A A T A T C T T T A T T T C A T T A C A T C T G T G T T G G T T T T T G T G T A A T C G T A A C T A A C A T A C G C T C C A T C A A A

3396 A C A A A C G A A A C A A A A C A A A C T A G C A A A A T A G G C T G T C C C C A G T G C A A G T G C A G G T G C C A G A A C A T T T C T A T C G A A