



**PvuI (7)**  
**SgfI (6)** 1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
**MfeI (82)** **EcoNI (96)**  
101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)**  
**Psp1406I (203)** 201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACAGCGCCCGCCCTACCTGAGGCC  
**PvuII (239)** **EcoNI (287)**  
301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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

**KasI (535)** **AgeI (552)**  
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCAAGATGGCTCCTGCTATGGAATCCCTACTCTACTGTGTGT  
1▶ M A P A M E S P T L L C V

**NcoI (670)**  
601 AGCCTTACTGTTCTTCGCTCCAGATGGCGTGTAGCAGTCCCTCAGAAACCTAAGGTCTCCTTGAACCTCCATGGAATAGAATATTTAAAGGAGAGAAT  
13▶ A L L F F A P D G V L A V P Q K P K V S L N P P W N R I F K G E N

**BspLU11I (709)**  
701 GTGACTTTACATGTAATGGAAACAATTTCTTTGAAGTCAGTTCACCAATGGTTCACAATGGCAGCCTTTTCAAGAGAGACAAATCAAGTTTGAATA  
47▶ V T L T C N G N N F F E V S S T K W F H N G S L S E E T N S S L N  
801 TTGTGAATGCCAAATTTGAGACAGTGGAGAATACAAATGTCAGCACCAAGTAAATGAGAGTGAACCTGTGTACCTGGAAGTCTTCAAGTACTGGCT  
80▶ I V N A K F E D S G E Y K C Q H Q Q V N E S E P V Y L E V F S D W L

**StuI (908)** **NcoI (957)** **BsrGI (980)**  
901 GCTCCTTCAGGCCTCTGCTGAGGTGGTGTGGAGGGCCAGCCCTCTTCTCAGGTGCATGGTTGGAGGAAGTGGATGTGTACAAGGTGATCTATTAT  
113▶ L L Q A S A E V V M E G Q P L F L R C H G W R N W D V Y K V I Y Y

**ScaI (1019)**  
1001 AAGGATGGTGAAGCTCTCAAGTACTGGTATGAGAACCACAACATCTCCATTACAAATGCCACAGTTGAAGACAGTGAACCTACTACTGTACGGGCAAG  
147▶ K D G E A L K Y W Y E N H N I S I T N A T V E D S G T Y Y C T G K

**PvuII (1105)** **ScaI (1163)**  
1101 TGTGGCAGCTGGACTATGAGTCTGAGCCCTCAACATTACTGTAATAAAAAGCTCCGCGTGAGAAGTACTGGCTACAATTTTTTATCCATTGTTGGTGGT  
180▶ V W Q L D Y E S E P L N I T V I K A P R E K Y W L Q F F I P L L V V  
1201 GATTCTGTTGCTGTGGACAGGATTATTTATCTCAACTCAGCAGCAGTACATTTCTCTTGAAGATTAAGAGAACCAGGAAAGGCTTCAAGTCTCTG  
213▶ I L F A V D T G L F I S T Q Q V T F L L K I K R T R K G F R L L

**MscI (1348)**  
1301 AACCCACATCCTAAGCCAAACCCAAAAACAACGTATATAATGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGACAAACCACAACCTAGAA  
247▶ N P H P K P N P K N N •

**HpaI (1480)** **MfeI (1491)**  
1401 TGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACCAAGTTAAACAACAATTGCAT

**EcoRI (1576)**  
1501 TCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAATCTTAAATACAGCATAGCAA  
1601 AACTTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGC  
1701 AGCCTCACCTTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGTTTGAAGTACTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACA

**SwaI (1829)** **EcoO109I (1890)**  
1801 TTCCCTTTTATGATAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCA  
1901 TAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTCGGTGTA  
141▶ • N R T Y

**BstXI (2119)** **SacI (2090)**  
2001 CTTGAGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTG  
136▶ 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 E R

**StuI (2254)**  
2101 CACATGCCACAGGGGCTGACCACCTGATGGATCTGCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGC  
102▶ 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 G N S

**BspHI (2404)** **AseI (2462)**  
2201 TCACAGCAGCCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCT  
69▶ 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 K T R  
2301 GATGGCCGCCCCGACATGGTCTTGTCTCATAGAGCATGGTGTCTCTCAGTGGCAGCTCCACAGCTCCAGATCCTGCTGAGAGATGTTGAAG  
36▶ 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 N F

**SacI (2519)**  
2401 GTCTTCATGATGGCCCTCTATAGTGTGATGCTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTT  
2▶ T K M

2501 ATCTGACGGTTCACATAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTG

2601 GAAAGTCCC GTT GATTTA **SpeI (2617)** **CTAGT** CAAAACAAACTCCCATTTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCCAT  
 2700 TGATGTA CTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTA CTGCCAAGTAGGAAAGTCCCAT AAGGTCATGTA CTGGGCATA  
 2800 ATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGTA CTGCCAAGTGGGCAGTTTACCGTAAATAC  
 2900 TCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGT TACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAG  
 3000 GCGGGCCATTTACCGTAAGTTATGTAACGCCT **G C A G G T T A A** TTAAGAA **BspLU11I (3046)** CATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCGT  
 3098 TGCTGGCGTTTTTTCATAGGCTCCGCCCCCTGACGAGCATC AAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCA  
 3198 GCGGTTTTCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCCTTCTCCCTTCGGAAGCGTGGCGCTT  
 3298 TCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGGTG TAGGTGCTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTT CAGCCCGACCGCTGCGCCT  
 3398 TATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGG  
 3498 CGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAA  
 3598 AGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAG  
 3698 AAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACCTACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC **AGC**  
 3798 **GGCCGCAATAAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAA**  
 3898 **ACAAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA**

**EagI**  
**NotI**

PacI (3776)    SmaI (3785)