



**PvuI (7)**  
**SgfI (6)**  
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
101 GAGAAAGTGGCGGGGTAACGGAAAGTGATGTCGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**Psp1406I (203)** **Bsu36I (291)**  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTACGCGCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
401 GGGCCTTTGTCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCTGCTTGTCTCAACTCTACGCTTTGTTTCGTTT

**AgeI (552)** **BspHI (568)** **NdeI (595)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTAGGAGGGCCATCATGAACAAACCATAACACCATCAACATAT  
1 M N K P I T P S T Y  
601 GTGCGCTGCCTCAATGTTGGACTAATTAGGAAGCTGTCAGATTTTATTGATCCTCAAGAAGGATGGAAGAAGTTAGCTGTAGCTATTAACCAACCATCTG  
11 V R C L N V G L I R K L S D F I D P Q E G W K K L A V A I K K P S  
701 GTGATGATAGATACAATCAGTTTACATAAGGAGATTTGAAGCATTACTTCAAACGGAAAAAGTCCCACTTCTGAATTACTGTTGACTGGGGCACCAC  
44 G D D R Y N Q F H I R R F E A L L T T G T G K S P T S E L L F D W G T T  
801 AAATTGCACAGTTGGTATCTTTGGATCTTTTGGATCCTTCCAAAATGATTTTGTCTGCAAGTCTTTTGTCTCCAGATGCTTCCCAAAACGTCTAAT  
77 N C T V G D L V D L L I Q N E F F A P A S L L L P D A V P K T A N  
901 AACTACCTTCTAAAGAAGCTATAACAGTTCAGCAAAAACAGATGCCTTCTGTGACAAAGACAGGACATTGATGACACCTGTGCAGAATCTTGAACAAA  
111 T L P S K E A I T V Q Q K Q M P F C D K D R T L M T P V Q N L E Q  
1001 GCTATATGCCACCTGACTCCTCAAGTCCAGAAAATAAAGTTTAGAAGTTAGTGATACAGTTTTTACAGTTTTTATTTTATGAATTGAAGAATGTCAC  
144 S Y M P P D S S S P E N K S L E V S D T R F H S F S F Y E L K N V T

**SnaBI (1179)**  
1101 AAATAACTTTGATGAACGACCCATTTCTGTTGGTGGTAATAAAATGGGAGAGGGAGGATTTGGAGTTGTATATAAAGGCTACGTAATAACACAACCTGTG  
177 N N F D E R P I S V G G N K M G E G G F G V V Y K G Y V N N T T V  
1201 GCAGTGAAGAAGCTTGACGAATGGTTGACATTACTACTGAAGAAGTAAACAGCAGTTTGTATCAAGAATAAAGTAAATGGCAAAGTGTCAACATGAAA  
211 A V K K L A A M V D I T T E E L K Q Q F D Q E I K V M A K C Q H E  
1301 ACTTAGTAGAACTACTTGGTTTCTCAAGTATGAGATGACCTCTGCTTAGTATATGTTTACATGCCTAATGGTTCATTGCTAGACAGACTCTTTGCTT  
244 N L V E L L G F S S D G D D L C L V Y V Y M P N G S L L D R L S C L

**BstXI (1413)**  
**XcmI (1410)**  
1401 GGATGGTACTCCACACTTTCTTGGCACATGAGATGCAAGATTGCTCAGGGTGCAGCTAATGGCATCAATTTTCTACATGAAAATCATCATATTCATAGA  
277 D G T P P L S W H M R C K I A Q G A A N G I N F L H E N H H I H R

**BspHI (1597)**  
1501 GATATTAAGTGCAAATATCTTACTGGATGAAGCTTTTACTGCTAAAATATCTGACTTTGGCCTTGACGGGCTTCTGAGAAGTTTGGCCAGACAGTCA  
311 D I K S A N I L L D E A F T A K I S D F G L A R A S E K F A Q T V  
1601 TGAAGTGCAGAAATGTGGGAACAACAGCTTATATGGCACCAGAAGCTTTGCGTGGAGAATAACACCCAAATCTGATATTTACAGCTTTGGTGTGGTTTT  
344 M T S R I V G T T A Y M A P E A L R G E I T P K S D I Y S F G V V L  
1701 ACTAGAAATAAATACTGGACTTCCAGCTGTGGATGAACACCGTGAACCTCAGTTATTGCTAGATATTAAGAAGAAATGAAGATGAAGAAAAGACAATT  
377 L E I I T G L P A V D E H R E P Q L L D I K E E I E D E E A K T I  
1801 GAAGATATATTGATAAAAAAGATGAATGATGCTGATTCACCTCAGTTGAACTATGTACTCTGTGTGCTAGTCAATGTCTGATAAGAAAATAAAG  
411 E D Y I D K K M N D A D S T S V E A M Y S V A S Q C L H E K K N K

**NheI (1961)** **EcoRI (1955)** **MscI (1967)**  
1900 AGACCAGACATTAAGAAGGTTCAAAGCTGCTGCAAGAGATGACAGCTTCTTAAAGAATTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTT  
444 R P D I K K V Q Q L L Q E M T A S •  
2000 TGGACAAACCACAACCTAGAATGCAGTGAAGAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAACAA

**HpaI (2099)** **EcoRI (2195)**  
2100 GTTAAACAACAACAAATTGCATTCAATTTATGTTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAATGTGGTATGGAAT  
2200 TCTAAAATACAGCATAGCAAACCTTAACTCCAATCAAGCCTCACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCC

**SapI (2377)**  
2300 AATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGATTTTCCCAAGGTTTGAAGTACTCTCTTCTTTTATGTTTT

**SspI (2434)** **SwaI (2448)**  
2400 AAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATC

**EcoO109I (2509)**  
2500 CAGATGCTCAAGGCCCTTCAATAATCCCCAGTTTAGTGTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTC

2600 TAGCTTTAGTTCTGGTGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAGCAGTCAGGAGCAT  
-1-1 • 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

**SacI (2709)** **BstXI (2738)**  
2700 AGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGT  
109 D S 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

**StuI (2873)**  
2800 AAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAAGCAGACAGTGCACCTGCAATGTAGGCTCAATGTGGACAGCAGAGATG  
76 F D 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

2900 ATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTGTTGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGAT  
 42 I E G 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  
 BbsI (3019)  
 XmnI (3015) AseI (3081)  
 3000 CCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGC  
 9 I Q Q S I N F T K M  
 SacI (3138)  
 3100 GTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGC  
 SpeI (3236)  
 3200 GGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCA  
 SnaBI (3364)  
 3300 AACCGTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCATA  
 NdeI (3469)  
 3400 AGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTG  
 3500 GGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGG  
 PacI (3655)  
 PstI (3648) SdaI (3647) BspLU11I (3665)  
 3600 TCGTTGGGCGTCCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAAAGGCCAGCAAAAAGGCCAGGAA  
 3700 CCGTAAAAAGGCCGCTTGTGCGTTTTTCCATAGGCTCCGCCCTCGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACA  
 3800 GGACTATAAAGATACCAGGCTTCCCTGGAAGCTCCCTCGTGTGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTT  
 ApaLI (3979)  
 3900 CGGGAAGCGTGGCGTTTTTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTCA  
 4000 GCCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGC  
 4100 AGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGC  
 4200 CAGTTACCTTCGGAAAAAGATTGGTAGCTCTTGATCCGGCAAACAACACCCTGTTAGCGGTGGTTTTTTGTTTGAAGCAGCAGATTACGCGCAG  
 PacI (4395)  
 4300 AAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTGGTCAATGGCTAGTTAA  
 EagI (4415)  
 SwaI (4404) NotI (4414)  
 4400 TTAACATTTAAATCAGCGGCCGAATAAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCA  
 4500 AAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA