



**PvuI (7)**  
**SgfI (6)**
**MfeI (82)**

1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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**Psp1406I (203)**
**HindIII (245)**

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCCTACCTGAGGCC  
 301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**  
**NaeI (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

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**KasI (535)**
**AgeI (552)**
**BspHI (560)**

501 TCTGTTCTGCGCGCTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCATCATGATTCATACCAACTGAAGAGAAAGTTCAGCTGCTT  
 601 TGTCTGGTCTTTCTCTGTTTGCATCATCTGCGTGTGGAAGAAAGGAGCGACTATGAGGCTTACATTGCAAGCAAGGTATTCCAGATGCCGAAG  
 13▶ V L V F L L F A I I C V W K K G S D Y E A L T L Q A K V F Q M P K

**XmnI (769)**

701 AGCCAGGAGAAAGTGCCCGTGGGCGCTGCTCCAGGCTGTGTTCTCAACAGCAAACAAGACCCCTAAGGAAGCGTTCAGATCCTCAGTACCCAGGG  
 47▶ S Q E K V A V G P A P Q A V F S N S K Q D P K E G V Q I L S Y P R

**BglII (884)**

801 TCACAGCCAAGGTCAAGCCACAGCCCTCCTTGCAGGTGTGGGACAAGGACTCCACATACTCAAAACTAACCCAGGCTGCTGAAGATCTGGAGGAACTA  
 80▶ V T A K V K P Q P S L Q V W D K D S T Y S K L N P R L L K I W R N Y

**BbrPI (991)**

901 TCTGAACATGAATAAATAAAGTGTCTACAAGGGCGGGACCAGGAGTCAAGTTCAGCGTAGAGGCGCTGCGCTGCCACCTTCGAGACCAGCTGAAT  
 113▶ L N M N K Y K V S Y K G P G P G V K F S V E A L R C H L R D H V N

**BstEII (1051)**

1001 GTGTCATGATAGAGGCCACAGATTTCCCTTCAACACCAGTGAATGGAGGGTTACCTGCCAAGGAGAACTTCAGAACCAAGGCTGGGCTTGGCATA  
 147▶ V S M I E A T D F P F N T T E W E G Y L P K E N F R T K A G P W H

**PstI (1118)**
**BspHI (1164)**

1101 AGTGTGCCGTCGTGTCTTTCGAGGATCTCTGAAGAACTCCAGCTGGGTCGAGAGATTGATAATCATGATGCGGTCCTGAGGTTAATGGGGACCTAC  
 180▶ K C A V V S S A G S L K N S Q L G R E I D N H D A V L R F N G A P T

**Eco47III (1274)**  
**AfeI (1274)**
**BsrGI (1295)**

1201 AGACAACCTCCAACAGGATGTGGGCACAAAACTACCATCCGCTAGTGAAGTCTCAGTTAGTACCACAGAAAAGCGCTTCCTGAAGACAGTTTGTAC  
 213▶ D N F Q Q D V G T K T T I R L V N S Q L V T T E K R F L K D S L Y

**SandI (1322)**
**BstBI (1384)**

1301 ACCGAAGGAATCCTGATTCTGTGGGACCCATCTGTGTATCATGCAGACATTCGCGAGTGGTATCAGAAGCCAGACTACAACCTTCGAAACCTATAAGA  
 247▶ T E G I L I L W D P S V Y H A D I P Q W Y Q K P D Y N F F E T Y K

**XcmI (1453)**  
**NcoI (1453)**
**BglII (1491)**

1401 GTTACCGAAGGCTTACCCAGCCAGCCTTTTACATCCTCAAGCCCCAGATGCCATGGGAACATATGGGACATCATTACAGAAATCTCTCCAGATCTGAT  
 280▶ S Y R R L H P S Q P F Y I L K P Q M P W E L W D I I Q E I S P D L I

**SphI (1523)**

1501 TCAGCCGAATCCCCATCCTCCGCATGCTGGGATCATCATTATGATGACGCTGTGTGACCAAGTTGATATTACGAGTTTCTCCATCCAAGCGCAAG  
 313▶ Q P N P P S S G M L G I I I M M T L C D Q V D I Y E F L P S K R K

**BsrBI (1663)**

1601 ACAGATGTGTCTACTATACCAGAAGTCTTTGACAGCGCTGCACGATGGGTGCCTACCATCCGCTCCTCTTCGAGAAGAATATGGTGAAGCATCTCA  
 347▶ T D V C Y Y H Q K F F D S A C T M G A Y H P L L F E K N M V K H L

**BspEI (1754)**

1701 ATGAGGGAACAGATGAAGACATTTATTTGTTGGGAAAGCTACCTGTCTGGCTTCCGGAACAATCGCTGTTGAGCCAGGCATCCTCATCCTTCTCCATA  
 380▶ N E G T D E D I Y L F G K A T L S G F R N N R C •

**MscI (1814)**  
**NheI (1808)**

1801 AGTCATTTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAGTGAAGTGAAGGAAATGCTTTATTTGTGAAATTTG

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**HpaI (1946)**
**MfeI (1957)**

1901 TGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGGAGGTGTGG

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**EcoRI (2042)**

2001 GAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAACTTCAAATAACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAAT  
 2101 CCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTTCATGGAGTTAAGATATAG

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**SspI (2281)**
**SwaI (2295)**

2201 TGTATTTTCCAAGGTTTGAAGTACTCTTCTTTTATGTTTAAATGCACTGACCTCCACATTCCTTTTATGTAATAATTCAGAAATAATTTA  
 2301 AATACATCATTGCAATGAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGA  
 2401 ACAAAGGAACCTTAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCTCAATGGTGGTTTTG  
 141▶ • N R T Y K L P I L E E I T T K

2501 ACCAGCTTGCCATTCACTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATC  
 124 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 V V R I S R  
 2601 TGTCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACA  
 91 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 I A E A C  
 2701 GACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGCTTGTGTCTCA  
 58 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 H K N D E  
 2801 TAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGATGGCCCTCCTATAGTGAGTCGTAT  
 24 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  
 2901 TATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTATA  
 3000 TAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAAA  
 3099 CTCCATTGACGTC AATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGACTGCCAAAACCGCATCATCATGGTAA  
 3199 TAGCGATGACTAATACGTAGATGTAAGTCCCAAGTAGGAAAGTCCATAAGGTCATGTAAGTGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTC  
 3299 AATAGGGGGCGTACTTGGCATATGATACACTTGTACTGCAAGTGGGCGAGTTTACCGTAAATACTCCACCATTGACGTC AATGGAAAGTCCCTATT  
 3399 GCGGTTACTATGGGAACATACGTCATTATTGACGTC AATGGGGGGGGTCTGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAAGTTATGTAACGCC T  
 3498 G 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 T A A A A A G G C C G 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 C T  
 3596 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 C C C G A C A G G A 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  
 3696 C T C T G T T C C G A C C C T G C C G T T A C C G G A T A C T G T C C G C T T T C T C C T T C G 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  
 3796 G G T G 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 C A C G A A C C C C C G T T C A G C C C G A C C G 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  
 3896 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 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  
 3996 A C T A C G G C T A C 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 T G A A G C C A G T T A C C T T C G A 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  
 4096 C A 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 A G A A 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  
 4196 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 A C A T T T A A A T C A G C G C C G C A A T A A A A T A T C T T T A T T T T C A T T A C A  
 4296 T C T G T G T T G G T T T T T T G T G T G 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 C A A A C G A A C A A A C A A A C T A G C A A A T A G G C T G T C C C C A G T G C A  
 4396 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  
 SacI (2556) BstXI (2585)  
 StuI (2720)  
 XmnI (2862) BspHI (2870)  
 AseI (2928) SacI (2985)  
 SpeI (3083)  
 SnaBI (3211)  
 NdeI (3316)  
 PstI (3495) SdaI (3494)  
 PacI (3502) BspLU11I (3512)  
 ApaLI (3826)  
 EagI (4262)  
 PacI (4242) SmaI (4251) NotI (4261)