



100

**PvuI (7)**  
**SgfI (6)**
**MfeI (82)** **EcoNI (96)**

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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**Psp1406I (203)**
**HindIII (245)**
**Bsu36I (291)**

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCAGAGGGCTCGCATCTCTCTTCACGCGCCCGCCGCTACCTGAGGCC  
 301 GCCATCCACGCGGTTGAGTCGCGTTCGCCGCTCCCGCCTGTGGTGCCTCCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

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

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTGAGCATGCAGAAATGTGATCAACACGGTGAAGGAAAAGGCTCT  
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▶

**PshAI (618)**
**PvuII (683)**

601 GGAAGTGGCCGAGTACCTGACCCCGTCTCAAGGAATCAAAATTTAAGGAAACGGGTGTAATCACCCGAGAAGATTTGTGGCAGCTGGAGATCACTTA  
 13▶ E V A E Y L T P V L K E S K F K E T G V I T P E E F V A A G D H L

**XcmI (712)**
**BstEII (783)**

701 GTCCACCACTGTCCAACATGGCAATGGGCTACAGGGGAAGAATTGAAAGTGAAGGCATATCTCCGACAGACAACAATTTTGGTAAACAAAATAGTTC  
 47▶ V H H C P T W Q W A T G E E L K V K A Y L P T D K Q F L V T T K N V

**BsaBI (886)**

801 CATGCTACAAGCGGTGTAACAGATGGAGTATTCGGATGAATTGGAAGCTATCATTGAAGAAGATGATGGTGTGGGGATGGGTAGATACATATCACAA  
 80▶ P C Y K R C K Q M E Y S D E L E A I I E E D D G D G G W V D T Y H N

**DraIII (983)**

901 CACAGGTATTACAGGAATTAAGGAGTAAAGGAGATTACACTGGAAGCAAGGACAGTATAAACTCCAAGATTGCTCAGCACTGTGTGATGAAGAA  
 113▶ T G I T G I T E A V K E I T L E S K D S I K L Q D C S A L C D E E

**PstI (1022)**

1001 GACGAGGAAGATGAAGGGGAAGCTGCAGACATGGAAGAATATGAAGAGAGTGGATTGTTGGAACAGATGAGGCTACCTAGACACAAGGAAAATAGTGG  
 147▶ D E E D E G E A A D M E E Y E E S G L L E T D E A T L D T R K I V

**BsrGI (1166)**
**SspI (1184)**
**BstXI (1198)**

1101 AAGCCTGCAAAGCTAAGGCTGACGCTGGAGGTGAAGATGCTATTTTACAAACGAGAACATACGACCTGTACATCACTTACGACAAATATTACCAGACACC  
 180▶ E A C K A K A D A G G E D A I L Q T R T Y D L Y I T Y D K Y Y Q T P

**PshAI (1264)**

**BspLUII (1253)**

1201 ACGGCTATGGTTGTTGGCTATGATGAGCAACGGCAGCCTTTAACAGTTGAGCACATGTATGAAGACATCAGTCAAGATCATGTGAAGAAAACAGTGACC  
 213▶ R L W L F G Y D E Q R Q P L T V E H M Y E D I S Q D H V K K T V T

**SphI (1356)**

1301 ATTGAAAACCATCCTCATCTCCACCACCTCCTATGTGTTGAGTTCACCCATGCAGGCATGCTGAAAGTGAAGAAAATTTGAGACAGTTGCAGAAG  
 247▶ I E N H P H L P P P P M C S V H P C R H A E V M K K I I E T V A E

**NdeI (1420)**

1401 GCGGGGAGAGCTTGGTGTTCATATGATCTTTTAAATTTTGTGAAATTTGTTCAAGCTGTCAACAAATAGAATATGACTACACAAGACACTTAC  
 280▶ G G G E L G V H M Y L L I F L K F V Q A V I P T I E Y D Y T R H F T

**MscI (1528)**
**NheI (1522)**

1501 AATGTAGTGGAGAGGCTATAGAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAACAAAATGCTTT  
 313▶ M •

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**HpaI (1660)**
**MfeI (1671)**

1601 ATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAGTTAACACAACAATTGCATTCAATTTATGTTTCAGGTTCC

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**EcoRI (1756)**

1701 AGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACCTTAACTCCAAATCAA  
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▶

1801 GCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTTGGCAATGTGCATTAGCTGTTGCAGCCTCACCTTCTTTCATGG

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**SspI (1995)**

1901 AGTTTAAAGATATAGTGTATTTTCCCAAGGTTTGAAGTACTCTTCATTCTTTATGTTTTAAATGCAGTACCTCCACATTCCTTTTATGATAAAAT

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**SwaI (2009)**
**EcoO109I (2070)**

2001 TCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTA  
 2101 GTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTCTGGTGTACTTGAGGGGGATGAGTTCCT  
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▶
▶

**SacI (2270)**
**BstXI (2299)**

2201 CAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGAC  
 129▶ 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 V

2301 CACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCA  
 96▶ 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

2401 ATGGCTTCAGCACAGACAGTGCACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTCTGATGGCCGCCCGACATGGT  
62 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 H

StuI (2434) BspHI (2584)

2501 GCTTGTTCCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCT  
29 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 (2576)

2601 ATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACG  
SacI (2699)

SpeI (2797)

2701 AGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACT  
2801 AGTCAAAACAAACTCCCATTTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCA

SnaBI (2925)

2901 TCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACC

NdeI (3030)

3001 GTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGG  
3101 AAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCTGTTGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTT

PstI (3209) SdaI (3208) PacI (3216) BspLU11I (3226)

3201 ATGTAACGCCTG 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 A A A A G G C C A 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 C C A T A G G C  
3299 T C C G C 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 C C C G A C A G G A C T A T 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  
3399 C C T C G T G C G C T C 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 C T G T C C G C T T T C C C C T T C G G A A G C G T G G C G T T T C C A T A G C T A C G C T G T A G G

ApaLI (3540)

3499 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 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  
3599 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 G C G A G G T A T G T A G C G G T G C T A C A G A G T T C T T G A A  
3699 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 T T A C C T T C G G A A A A A G A G T T G G T A G C T T T G A T C C  
3799 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 A A A A G 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

EagI (3976) PacI (3956) SwaI (3965) NotI (3975)

3899 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 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  
3999 T 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 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 A C A 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  
4099 T 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