



100

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

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC  
 301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

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**BspHI (560)**

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACGGTCATCATGACCATCCTTTTCTTACTATGGTTATTTTCATACTT

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1▶ M T I L F L T M V I S Y F

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**NcoI (678)**

601 CGGTTGCATGAAGGCGGCGCCCATGAAAGAAGTAAACGTCACGGACAAGGCAACTTGGCCTACCCAGGTGTGCGGACCCATGGACTCTGGAGAGCGTG  
 13▶ G C M K A A P M K E V N V H G Q G N L A Y P G V R T H G T L E S V

701 AATGGGCCAGGGCAGGTTTCGAGAGGTCTGACGACGACATCACTGGCTGACACTTTTGGACGACGTCATCGAAGAGCTGCTGGATGAGGACCAGAAGGTTT  
 47▶ N G P R A G S R G L T T T S L A D T F E H V I E E L L D E D Q K V

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**XmaI (842)** **SmaI (842)**

801 GGCCCAACGAAGAAAACCATAAGGACGCGGACTTGTACACTTCCCGGGTGTGCTCAGCAGTCAAGTGCCTTTGGAGCCTCTACTCTTTCTGCTGGA  
 80▶ R P N E E N H K D A D L Y T S R V M L S S Q V P L E P P L L F L L E  
 901 GGAATACAAAAATTACCTGGATGCCGCAACATGTCTATGAGGGTTCGGCGCCACTCCGACCCGCCCCGCGTGGGGAGCTGAGCGTGTGTGACAGTATT  
 113▶ E Y K N Y L D A A N M S M R V R R H S D P A R R G E L S V C D S I  
 1001 AGCGAGTGGTTCACAGCGGCAGATAAAAAGACTCAGTGGACATGTCTGGCGGGACGGTCACAGTCTAGAGAAAAGTCCCGGTATCCAAGGCCAACTGA  
 147▶ S E W V T A A D K K T A V D M S G G T V T V L E K V P V S K G Q L

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**NcoI (1130)**

1101 AGCAGTATTTCTACGAGACCAAGTGAATCCCATGGGTTACACCAAGGAAGGCTGCAGGGGCATAGACAAAAGGCACTGGAATCGCAATGCCGAACCTAC  
 180▶ K Q Y F Y E T K C N P M G Y T K E G C R G I D K R H W N S Q C R T T

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**EcoO109I (1214)** **Bsp120I (1214)**
**BsrGI (1282)**

1201 CCAATCGTATGTTCCGGCCCTTACTATGGATAGCAAAAAGAGAATTGGCTGGCGATTGATAAGGATAGACACTTCTGTGTATGTACTGACCTGACCAATAAA  
 213▶ Q S Y V R A L T M D S K K R I G W R F I R I D T S C V C T L T I K

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**MscI (1330)** **BalI (1330)**

1301 AGGGGAAGATAGTGGATTATGTTGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCT  
 247▶ R G R •

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**HpaI (1462)** **MfeI (1473)**

1401 TTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAAATGCATTATTTATGTTTCAGGT

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**EcoRI (1558)**

1501 TCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAAATCTAAAATACAGCATAGCAAACTTTAACCTCAAATC  
 1601 AAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCAT

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**SspI (1797)**

1701 GGAGTTTAAAGATATAGTGTATTTTCCCAAGGTTTGAAGTAGCTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATCCCTTTTTAGTAAAAAT

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**SwaI (1811)**
**EcoO109I (1872)**

1801 ATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAG  
 1901 TAGTTGGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGCTGTTACTTGGAGGGGATGAGTTC  
141▶ • N R T Y K L P I L E

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**SacI (2072)**

2001 CTCAATGGTGGTTTTGACCAGTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTG  
 130▶ 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 C M G C P S

**BstXI (2101)**

2101 ACCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCCAATGGTGTCAAAGTCCCTTCTGCCCGTTGCTCACAGCAGACCAATGG  
 96▶ 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 V A S G I A

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**StuI (2236)** **Eco147I (2236)**

2201 CAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGGACATG  
 63▶ 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

2301 GTGCTTGTGTCCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTTCATGATGGCCCTC  
 30 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 T K M ←

BspHI (2386)  
XmnI (2378)

VspI (2444)  
AseI (2444)

2401 CTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCCTAA  
 ←

SpeI (2599)

SnaI (2727)  
Eco105I (2727)

2501 CGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTA  
 2601 CTAGTCAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAACC  
 ←

NdeI (2832)

2700 GCATCATCATGGTAATAGCGATGACTAATCGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTT  
 2800 ACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGAGTTTACCGTAAATACTCCACCCATTGACGTCAA  
 2900 TGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAA

SdaI (3010)PaeI (3018)

3000 GTTATGTAACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGCGTTTTTCCATA  
 ←  
 3098 GGCTCCGCCCCCTGACGAGCATCAGAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAG  
 3198 CTCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGCTTCTCATAGCTCACGCTGT

ApaLI (3342)

3298 AGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTGAGCCCGACCCTGCGCCTTATCCGGTAACTATCGTC  
 3398 TTGAGTCAAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGGGTGCTACAGAGTTCTT  
 3498 GAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGA  
 3598 TCCGCAAACAACCACCGCTGGTAGCGGTGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTT

EagI (3778)  
NotI (3777)

PaeI (3758) SwaI (3767)

3698 CTACGGGTCTGACGCTCAGTGGAAACGAAAACCTACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGCCGCAATAAAATATCT  
 3798 TTATTTTCATTACATCTGTGTGTTGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAAATAGG  
 3898 CTGTCACAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA