



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

1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGCC

301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCCTCTGAAGTGCCTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

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

501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGGTCATCATGAAATCACTCTCATATAGAGAATCTGGATGAAGA

130 M K Y H S H I E N L D E D

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**XcmI (676)**

601 TGGATATACTCAATTAGACTTCAGCACTCAAGACATCCATAAAAGGCCAGGGATCAGAGAAAGGAAGCCGGCTCCATCTTCACCTTGAGAGGCCATT

130 G Y T Q L D F S T Q D I H K R P R G S E K G S R A P S S P W R P I

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**PstI (743)**
**AvrII (759)**
**NsiI (799)**

701 GCAGTGGGTTTAGGAATCCTGTGCTTTGTGGTAGTAGTGGTTCGTCAGTGTGGTGCCTAGGAGGTTTTTCTCAGTCTTGCCTTCTAATTGGATCA

470 A V G L G I L C F V V V V V A A V L G A L G G F S Q S C L P N W I

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**SapI (807)**

801 TGCATGGGAAGAGCTGTTACCTATTTAGCTTCTCAGGAAATTCCTGGTATGGAAGTAAGAGACTGCTCCAGCTAGGTGCTCATCTACTGAAGATAGA

800 M H G K S C Y L F S F S G N S W Y G S K R H C S Q L G A H L L K I D

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**NsiI (953)**
**AseI (949)**
**StuI (966)**
**NcoI (994)**

901 CAACTCAAAGAATTTGAGTTCATTGAAAGCCAAACATCGTCTCACCGTATTAATGCATTTTGGATAGGCCTTCCCGCAATCAGAGTGAAGGCCATGG

113 N S K E F E F I E S Q T S S H R I N A F W I G L S R N Q S E G P W

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**HindIII (1065)**

1001 TTCTGGGAGGATGGATCAGCATTCTCCCAACTCGTTTCAAGTCAGAAATACAGTTCGCCAGGAAAGCTTACTGCACAATTGTGTATGGATTATGGAT

147 F W E D G S A F F P N S F Q V R N T V P Q E S L L H N C V W I H G

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**MscI (1168)**
**NheI (1162)**

1101 CAGAGGTCTACAACCAAATCTGCAATACTTCTCATAAGTATCTGTGAGAAGGAACTGTAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTT

180 S E V Y N Q I C N T S S Y S I C E K E L •

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1201 TGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAACAA

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**HpaI (1300)**
**EcoRI (1396)**

1301 GTTAAACAACAATTGCATTCATTTTATGTTTCAGGTTCAAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAAT

1401 TCTAAATACAGCATAGCAAACCTTAACTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCC

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**SapI (1578)**

1501 AATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAACCTAGCTCTTCATTTCTTTATGTTTT

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**SspI (1635)**
**SwaI (1649)**

1601 AAATGCACTGACCTCCACATTCCCTTTTATGAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATC

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**EcoO109I (1710)**

1701 CAGATGCTCAAGGCCCTTATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATGGACAGCAAGAAAGCGAGCTTC

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1801 TAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAGCAGTCAGGAGCAT

141 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

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**SacI (1910)**

1901 AGTCAGAGATGAGCTCTGTCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTG

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

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**StuI (2074)**

2001 AAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTACAGCAGACAGTACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATG

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

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2101 ATCTCCCAGTCTTGGTCTGATGGCCGCCGACATGGTGTGTTGCTCCTATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGAT

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

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**BbsI (2220)**
**XmnI (2216)**
**AseI (2282)**

2201 CCTGCTGAGAGATGTTGAAGGCTTTCATGGTGGCCCTCTATAGTGTGATTTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGC

9 Q Q S I N F T K M

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**SacI (2339)**

2301 GTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTTGCGTCAATGGGGC

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**SpeI (2437)**

2401 GGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATTTGACGTCAATGGGGTGGAGACTTGGAAATCCCGTGAGTCA

2501 AACCGCTATCCACGCCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAAGTAGGAAAGTCCCATA  
SnaBI (2565)

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2601 AGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTG  
NdeI (2670)

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2701 GGCAGTTTACCGTAAACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGG

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PacI (2856)  
PstI (2849)  
SdaI (2848)      BspLU11I (2866)

2801 TCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAATTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAA  
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2901 CCGTAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACA

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3001 GGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCCTTCTCCCTT

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ApaLI (3180)

3101 CGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTCA

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3201 GCCCAGCCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGC

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3301 AGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGC

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3401 CAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAG

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3501 AAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGCTGACGCTCAGTGGAACGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAA  
PacI (3596)

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EagI (3616)  
SwaI (3605)      NotI (3615)

3601 TTAACATTTAAATCAGCGGCCGAATAAAAATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCA

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3701 AAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAAGTGCCAGAACATTTCTCTATCGAA