



100  
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**PvuI (7)**  
**SgfI (6)**
**MfeI (82)** **EcoNI (96)**

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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**Psp1406I (203)**
**HindIII (245)** **EcoNI (287)**

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCCGCCGCCCTACCTGAGGCC  
 301 GCCATCCACGCGGTTGAGTGCCTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

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**NcoI (560)** **BstEII (555)**

501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGGCTACTCTGAGATCACCGGTCACCATGGCCAGGCCATCTGTGGATCTGGTTCCTTTGCCT  
1▶ M A Q R H L W I W F L C L

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**SspI (685)**

601 ACAAACCTGGTCTGAAGCAGCAGGAAAAGATGCAGACCCGATGGTAATGAATGGGATTCTTGGGAGTCAAGTACTTTCTCTTAAATATTCAAGAACCA  
 13▶ Q T W S E A A G K D A D P M V M N G I L G E S V T F L L N I Q E P  
 701 AAGAAAATTGACAACATTGCCTGGACTTCTCAATCATCTGTTGCTTTTATAAAACCAGGAGTCAATAAAGCTGAAGTTACCATAACCCAGGGCACTTATA  
 47▶ K K I D N I A W T S Q S S V A F I K P G V N K A E V T I T Q G T Y

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**Tth11I (832)**

801 AAGGACGAATAGAAATCATAGATCAGAAGTATGACCTGGTCTATTAGAGACCTGAGGATGGAAGATGCAGGAACCTACAAAGCAGACATCAATGAAGAGAA  
 80▶ K G R I E I I D Q K Y D L V I R D L R M E D A G T Y K A D I N E E N

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**BglIII (917)** **Sall (941)**
**EcoRV (975)** **Eco32I (975)**

901 TGAGGAAACCATACCAAGATCTACTACCTTCATATCTACCGTCGACTTAAAAACCAAAAAATTACACAGAGTTTGATATCATCTTTGAACAATACCTGT  
 113▶ E E T I T K I Y Y L H I Y R R L K T P K I T Q S L I S S L N N T C  
 1001 AATACACACTGACATGCTCTGTGAAAAGGAAAAGGATGTCACATATAGCTGGAGTCCCTTTGGAGAGAAAAGCAATGTCCTTCAAATCGTCCACT  
 147▶ N I T L T C S V E K E E K D V T Y S W S P F G E K S N V L Q I V H

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**NcoI (1103)** **BspLU11I (1126)**
**Tth11I (1162)**

1101 CCCCATGGACAAAAAATGACCTACACATGTACAGCCGAGAACCCTGTGACGAAACAGTTCTGACTCTGTCACTGTCCAGCAGCCATGTACAGACACTCC  
 180▶ S P M D Q K L T Y T C T A Q N P V S N S S D S V T V Q Q P C T D T P  
 HindIII (1200)

1201 AAGCTTCCATCCTCGCCATGCTGTGTTGCCAGGAGGATTGGCCGTGCTCTTTCTGCTTATTCTCATTCCGATGTTGGCATTCTGTTCCGTTTGTACAAG  
 213▶ S F H P R H A V L P G G L A V L F L L I L I P M L A F L F R L Y K  
 1301 AGAAGCGAGACAGGATTGCTGGAAGCAGATGATGTCTCAAAGAAAACAGTATATGCTGTAGTTTCAAGAAATGCTCAACCCACAGAGTCCAGAATCT  
 247▶ R R R D R I V L E A D D V S K K T V Y A V V S R N A Q P T E S R I  
 1401 ATGATGAAATCCCTCAGTCCAAGATGCTGCTGTAAGGAAAGTCAAGTACCACCATTTCTCAGTGCAGCTTTCTGAGAAGATGAAGGAAACCAA  
 280▶ Y D E I P Q S K M L S C K E D P V T T I Y S S V Q L S E K M K E T N

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**PshAI (1507)**
**MscI (1586)** **NheI (1580)**

1501 CATGAAGGACAGAAGTCTGCCTAAGGCTTTGGGTAATGAAATTGTTGTCTAGGTGATTCTCTAAGACCACGAAGGACACAGCTAGCTGGCCAGACATGAT  
 313▶ M K D R S L P K A L G N E I V V •  
 1601 AAGATACATTGATGAGTTTGGACAAACCACAAC TAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATT

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**HpaI (1718)** **MfeI (1729)**

1701 ATAAGCTGCAATAAACAAGTTAAACAACAACATTGCATTCTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAACCTCT

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**EcoRI (1814)**

1801 ACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAG  
 1901 GCATCAGGGGCTGTTGCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGTTTGAAGTAGCTC

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**SspI (2053)** **Swal (2067)**

2001 TTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTATAGTAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAAATAATGT

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**EcoO109I (2128)**

2101 TTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTGTAGTGTGGACTTAGGGAACAAGGAACCTTTAATGAAATTTGGAC

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**SacI (2328)** **BstXI (2357)**

2201 AGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCA  
 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  
 2301 CAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGTCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCT  
 115▶ F C D P A Y 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  
**StuI (2492)** **Eco147I (2492)**

2401 GACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCCTCA  
 82▶ V A V I T D 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

2501 ATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCCTGATGGCCGCCCGACATGGTGTCTTGTGCTCATAGAGCATGGTATCTTCTCAGTGGCGA  
48 I H V A S I 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  
BspHI (2642)  
2601 CCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATG  
15 I E V L E L D Q Q S I N F T K M  
VspI (2700) SacI (2757)  
2701 ATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGC  
AseI (2700)  
2800 CCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGAC  
SpeI (2855)  
2899 TTGGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGACTG  
SnaBI (2983) Eco105I (2983)  
2999 CCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATAC  
NdeI (3088)  
3099 ACTTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTA  
PstI (3267) SdaI (3266) PacI (3274) BspLU11I (3284)  
3199 TTGACGTCAATGGGCGGGGTCGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTG C A G G T T A A T T A A G A A C A T G T G A C A A  
3297 AAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAG  
3397 TCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCCTGGAAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCTGCCGCTTACCGGA  
3497 TACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCAAGCTGGGCT  
ApaLI (3598)  
3597 GTGTGCACGAACCCCGTTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGC  
3697 AGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTT  
3797 GGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTGT  
3897 GCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGCTGACGCTCAGTGAACGAAAACCTCACGTTAAGG  
EagI (4034)  
3997 GATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTTCATTACATCTGTGTGTTGTTTTTTGTGTAATCGT  
PacI (4014) SmaI (4023) NotI (4033)  
4097 AACTAACATACGCTCTCCATCAAACAAACGAAACAAACAAACTAGCAAATAGGCTGTCCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCG  
4197 AA