



**PvuI (7)**  
**SgfI (6)** **EcoNI (96)**  
1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTCGGCAATTGAACGGGTGCCTA  
101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

**HindIII (245)** **Bsu36I (291)**  
**Psp1406I (203)** **PvuII (239)** **EcoNI (287)**  
201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACAGCGCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCGGTTGAGTCGCGTTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

**NgoMIV (441)**  
**NaeI (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

**KasI (535)** **SgrAI (551)**  
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGCGCGCTACCTGAGATCACCGCGAAGGAGGGCCACCATGAAGTCGCTGTTCTTTCTCTTGG  
601 GCATCATCTTCTGGAGCAGTGTGGAGTTCGAGGAACCTAGTGATAAGGAATGCACGATGCTCCTGCATCAGCACCAGCCGAGGCACGATCCACTACAA  
101 G I I F L E Q C G V R G T L V I R N A R C S C I S T S R G T I H Y K

**BspEI (796)**  
701 ATCCCTCAAAGACCTCAAACAGTTTGCCCAAGCCCAATTGCAACAAAAGTAAATCATTGCTACACTGAAGAACGGAGATCAAACCTGCCTAGATCCG  
43 S L K D L K Q F A P S P N C N K T E I I A T L K N G D Q T C L D P  
801 GACTCGGCAAATGTGAAGAAGCTGATGAAAGAATGGGAAAAGAAGATCAGCCAAAAGAAAAGCAAAGAGGGGGAAAAAACATCAAAGAACATGAAAA  
77 D S A N V K K L M K E W E K K I S Q K K K Q K R G K K H Q K N M K

**MscI (988)**  
**NheI (982)**  
901 ACAGAAAACCCAAAACACCCCAAAGTCGTGCTGTTCAAGGAAGACTACATAAGAGACCATTACTTTACCAACAAGCACCCCTGCTAGCTGGCCAGACATG  
110 N R K P K T P Q S R R R S R K T T •  
1001 ATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCA

**HpaI (1120)**  
1101 TTATAAGCTGCAATAAACAAGTTAAACAACAACATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCT

**EcoRI (1216)**  
1201 CTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACCTTAACTCCAAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAGGCAT  
1301 AGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTCATGGAGTTAAGATATAGTGATTTTTCCAAGGTTTGAAGTAC

**SspI (1455)** **SwaI (1469)**  
1401 TCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAAATAAT

**EcoO109I (1530)**  
1501 GTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGG  
1601 ACAGCAAGAAAGCAGCTTCTAGCTTTAGTTCTGTTGACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAG  
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

**SacI (1730)** **BstXI (1759)**  
1701 CACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGC  
116 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 D V E D S Y P H

**StuI (1894)**  
1801 CTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCCAGCAGACAGTACCCTGCCAATGTAGGCCT  
82 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 V T V R G I Y A E  
1901 CAATGTGGACAGCAGAGATGATCTCCCAAGTCTTGGTCTGATGGCCGCCGACATGGTCTTGTGCTCATAGAGCATGGTATCTTCTCAGTGGC  
49 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

**BspHI (2044)**  
**BbsI (2040)**  
**XmnI (2036)**  
2001 GACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCTATAGTGAGTCTGATTATACTATGCCGATATACTATGCCGA  
16 V E V L E L D Q Q S I N F T K M

**AseI (2102)** **SacI (2159)**  
2101 TGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACC

**SpeI (2257)**  
2200 GCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCATTGACGTCAATGGGGTGGAG

**SnaBI (2385)**  
2299 ACTTGAAATCCCGTGAGTCAAACCGCTATCCAGCCCAATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAC

**NdeI (2490)**  
2399 TGCCAAGTAGAAAGTCCATAAGGTGATGTAAGTGGGCATAATGCCAGGCGGGCCATTACCCTGATGACGTCAATAGGGGGCTACTTGGCATATGAT  
2499 ACACCTGATGTAAGTCCAAAGTGGGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCAT

**PstI (2669)**  
**SdaI (2668)** **PacI (2676)** **BspLU11I (2686)**

2599 TATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAAC**GCTGCAGGTTAA**TTAAGAACATGTGAGC  
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2697 AAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCA

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2797 AGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCTGTTCCGACCCTGCCGTTACCG

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2897 GATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGG

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**ApaLI (3000)**

2997 CTGTGTGCACGAACCCCCGTTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCA

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3097 GCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTAT

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3197 TTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTGT

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3297 TTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAA

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**EagI (3436)**

PacI (3416) **Swal (3425)** **NotI (3435)**

3397 GGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTAAT

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3496 CGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCCAGTGCAAGTGCAAGTGCCAGAACATTTCTCTA

3596 TCGAA