



**PvuI (7)**  
**SgfI (6)** 1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
**MfeI (82)**  
101 GAGAAAGTGGCGCGGGTAAACTGGAAAAGTGTCTGTACTGGCTCCGCTTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

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**HindIII (245)**  
**Psp1406I (203)** 201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCCTACCTGAGGGC  
**PvuII (239)**  
**Bsu36I (291)**  
301 GCCATCCACGCCGGTTGAGTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAACTGCGTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**  
401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

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**AgeI (552)** **BspLU11I (560)**  
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCTACCTGAGATCACCGTCAACATGTTTGTCTGCTACCAAGAGCTTCGTTAAGCAAGT  
1 M F A A A T K S F V K Q V  
601 TGGAGATGGAGGGAGATTAGTCCCTGTCCCAAGCCTCAGCGAAGCTGACAAGTACCAACCCCTGAGTCTGGTGGTAAAAAGAAGCGGTGTTTTCTGTTT  
13 G D G G R L V P V P S L S E A D K Y Q P L S L V V K K K R C F L F  
**PvuII (767)**  
701 CCTAGATGCAAATTCACATCCACTCCTTTCACACTTAAAGATATTCTCCTGGGAGATCGAGAAATTCAGCTGGAATTTTCATCTTATCAGTTACTGAATT  
47 P R C K F T S T P F T L K D I L L G D R E I S A G I S S Y Q L L N  
**AseI (865)** **HindIII (899)**  
801 ATGAAGATGAGTCAGATGTTTCCCTCTATGGAAGGCGAAGCAACCATATTGTGAATGACGTGGGGATTAATGTCAGTGGATCTGATTCCATCGCAGTCAA  
80 Y E D E S D V S L Y G R R S N H I V N D V G I N V T G S D S I A V K  
**XcmI (920)**  
901 AGCTTCATTTGGTGTCTGACCAAAACATGAGGTGGAAGTTTCGACATTACTCAAGGAGATTACTGCACGAAAAATTAACCTTGACCACAGTTTGATCCGC  
113 A S F G V V T K H E V E V S T L L K E I T A R K I N F D H S L I R  
**ApaLI (1078)**  
1001 CAATCAAGGAGCAGCAGGAAGCGGTGCTGTGCGTGGTCTGAGAGCATCCGAACCACGCGCAGTCTCTGTGACGTGCACGCTGGGATTCGTTGGGG  
147 Q S R S S R K A V L C V V M E S I R T T R Q C S L S V H A G I R G  
1101 AAGCCATGCGGTTTCATTTTATGGATGAACAGAATCCCAAGGGAAGGAAAAGGCTATTGTTTTCCAGCAGCACAACACTATAGCTTTCAGTGTTTTTGA  
180 E A M R F H F M D E Q N P K G R E K A I V F P A H T T I A F S V F E  
**SapI (1200)**  
1201 GCTCTTCTACCTGGACGGTGCCTTCGACATTTGTGTACATCTGTGTCAAAGGAGGATTTGAAAGGGAAGAAACGACAACCTTTGCCATGTTCTAC  
213 L F I Y L D G A F D I C V T S V S K G G F E R E E T T T F A M F Y  
**BstBI (1318)**  
1301 AGACTGAGAAATATACTCTCGAAAGAAACAGGAGAGTGTGACGCCATCTCTCGTCCCAGCTTTACCTGGACGACCTTTTTCTGACTTCTACGACA  
247 R L R N I L F E R N R R V M D A I S R S Q L Y L D D L F S D F Y D  
**BstAPI (1487)** **Bsp120I (1480)**  
1401 AACCCCTCAGCATGACTGACATTTCCCTCAAGGAGGGGACTCACATCCGAGTGAACCTACTAAACCACAACATTCCTAAAGGCCCTGCATCCTCTGCGG  
280 K P L S M T D I S L K E G T H I R V N L L N H N I P K G P C I L C G  
**BbsI (1571)** **EcoRV (1594)**  
1501 AATGGGAACTTGAAAAGGAGACGGTCTACGGCTGCTTCCAGTGTCTGTGGACGGCGTGAAGTACGTGCGTCTTCACGCAGTCCCTTGCTTTGATATC  
313 M G N L K R E T V Y G C F Q C S V D G V K Y V R L H A V P C F D I  
**MscI (1629)**  
**NheI (1623)**  
1601 TGGCACAAGAGAATGAAATAAAAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACACTAGAATGCAGTGAAAAAATGCTT  
347 W H K R M K •

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**HpaI (1761)** **MfeI (1772)**  
1701 TATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAAGTTAAACAACAACAAATTGCATTCATTTTATGTTTCAGGTT

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**EcoRI (1857)**  
1801 CAGGGGGAGGTGTGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCAAATCA  
1901 AGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTTCATG

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**SapI (2039)** **SspI (2096)**  
2001 GAGTTTAAGATATAGTGTATTTTCCCAAGGTTTGAAGTCTCTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAAATA

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**SwaI (2110)**  
2101 TTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTGT  
2201 AGTTGGACTTAGGGAACAAAGGAACCTTAATAGAAATTTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCC  
141 • N R T Y K L P I L E  
2301 TCAATGGTGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGA  
129 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 V

**BstXI (2400)**  
2401 CCACCCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGCTTCTGCCCGTTGCTCACAGCAGACCCAATGGC  
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

**StuI (2535)**  
2501 AATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCTGATGGCCGCCCGACATGG  
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

**BbsI (2681)**  
**XmnI (2677)**  
2601 TGCTTGTGTCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGGTGGCCCTCC  
29 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

**AseI (2743)**  
2701 TATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAAC  
SpeI (2898)

2801 GAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAAGTCCCGTTGATTTAC  
2901 TAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGACTGCCAAAACCGC  
SnaBI (3026)

3001 ATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGTCTGACTGGGCATAATGCCAGGCGGGCCATTTAC  
NdeI (3131)

3101 CGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGATGACTGCCAAGTGGGCAGTTTACCCTAAATACTCCACCATTGACGTCAATG  
3201 GAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCTGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGT  
PacI (3317)  
**PstI (3310)**  
**SdaI (3309)**  
**BspLU11I (3327)**  
3301 TATGTAACGCCCTGCAGGTTAAITTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGCCGCGTTGCTGGCGTTTTTCCATAGGCT  
3401 CCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCTTTCCCTGGAAAGTCC  
3501 CTCGTGCGCTCTCTGTTCCGACCTGCCGTTACCGGATACCTGTCCGCTTCTCCCTTCGGAAGCGTGGCGTTTCTCATAGCTCAGCTGTAGGT  
ApaLI (3641)

3601 ATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGTGTGTGCACGAACCCCGTTCAGCCCGACCGCTGCGCTTATCCGGTAACTATCGTCTTGA  
3701 GTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAG  
3801 TGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCG  
3901 GCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTAC  
**EagI (4077)**  
**PacI (4057)** **SwaI (4066)** **NotI (4076)**  
4001 GGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAATCAGCGGCCGCAATAAAATATCTTTAT  
4101 TTTCATTACATCTGTGTGTTGTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGT  
4201 CCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA