



**PvuI (7)**  
**SgfI (6)**

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

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**Psp1406I (203)**

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGGCCGACAGACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACACGCCGCCGCCCTACCTGAGGCC  
 301 GCCATCCACGCCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**HindIII (245)**

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

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**Bsu36I (291)**  
**EcoNI (287)**

501 TCTGTTCTGCGCGGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTCATCATGAATAGGCACCTCTGGAAGAGCCAACCTGTGTGAGAT  
 601 GGTGCAGCCAGTGGTGGCCCGCAGCAGATCAGGACGTAAGTCTCCTCTGGGGAAGCCAGCCATGCTGCACCTGCCTTCAGAACAGGGC  
 13▶ V Q P S G G P A A D Q D V L G E E S P L G K P A M L H L P S E Q G  
 1▶ M N R H L W K S Q L C E M

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**AgeI (552)**  
**BspHI (560)**

701 GCTCCTGAGACCTCCAGCGCTGCTGGAGGAGAATCAAGAGCTCCGAGATGCCATCCGGCAGAGCAACCAGATTCTGCGGGAGCGCTGCGAGGAGCTTC  
 47▶ A P E T L Q R C L E E N Q E L R D A I R Q S N Q I L R E R C E E L

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**Eco47III (716)**  
**Eco47III (782)**

801 TGCATTTCCAAGCCAGCCAGAGGGAGGAGAAGGAGTTCCTCATGTGCAAGTTCAGGAGGCCAGGAACTGGTGGAGAGACTCGGCCTGGAGAAGCTCGA  
 80▶ L H F Q A S Q R E E K E F L M C K F Q E A R K L V E R L G L E K L D

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**XmnI (828)**  
**XcmI (860)**  
**BstXI (860)**

901 TCTGAAGAGGCAGAAGGAGCAGGCTCTGCGGGAGTGGAGCACCTGAAGAGATGCCAGCAGCAGATGGCTGAGGACAAGGCCTCTGTGAAAGCCAGGTG  
 113▶ L K R Q K E Q A L R E V E H L K R C Q Q Q M A E D K A S V K A Q V

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**BstAPI (918)**  
**StuI (977)**

1001 ACGTCCTTGTCTGGGAGCTGCAGGAGAGCCAGAGTGCCTTGGAGGCTGCCACTAAGGAATGCCAGGCTCTGGAGGGTCCGGCCGGCCGCGCCAGCGAGC  
 147▶ T S L L G E L Q E S Q S R L E A A T K E C Q A L E G R A R A A S E

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**DraIII (1144)**  
**BstAPI (1143)**  
**SphI (1169)**  
**FspI (1166)**

1101 AGGCGCGCAGCTGGAGAGTGGAGCGGAGGCGCTGCGAGCAGCAGCAGCGTGGACCGTGCATGCAGGGCCAGAGCGTGGAGGCCGCGCT  
 180▶ Q A R Q L E S E R E A L Q Q Q H S V Q V D Q L R M Q G Q S V E A A L  
 1201 CCGCATGGAGCGCCAGGCCGCTCGGAGGAGAAGGAAAGCTGGCCAGTTGCAAGTGGCCTATCACCAGCTCTTCCAAGAATACGACAACCACATCAAG  
 213▶ R M E R Q A A S E E K R K L A Q L Q V A Y H Q L F Q E Y D N H I K

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**BsrBI (1318)**  
**BglII (1344)**  
**MscI (1385)**

1301 AGCAGCGTGGTGGCAGTGGAGCGGAGGAGGAGGAGTGCAGCTGGAAGATCTCAAACAGCAGCTCCAGCAGGCCGAGGAGGCCCTGGTGGCCAAACAGGAGG  
 247▶ S S V V G S E R K R G M Q L E D L K Q Q L Q Q A E E A L V A K Q E

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**ClaI (1402)**  
**EcoRV (1477)**

1401 TGATCGATAAGCTGAAGGAGGAGGCCGAGCAGCACAAGATTGTGATGGAGACCGTCCGGTGTGTAAGGCCAGGCGGATATCTACAAGCGGACTTCCA  
 280▶ V I D K L K E E A E Q H K I V M E T V P V L K A Q A D I Y K A D F Q

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**XmaI (1514)**  
**SdaI (1545)**

1501 GGCTGAGAGGCAGGCCCGGAGAAGCTGGCCGAGAAGAAGGAGCTCCTGAGGAGCAGCTGGAGCAGCTGCAGAGGGAGTACAGCAAACCTGAAGGCCAGC  
 313▶ A E R Q A R E K L A E K K E L L Q E Q L E Q L Q R E Y S K L K A S  
 1601 TGTGAGGAGTCCGCGAGGATCGAGGACATGAGGAAGCGGCATGTCGAGGCTCCAGGCCCTTGCCTCCGCTCTCTCTCCCTGG  
 347▶ C Q E S A R I E D M R K R H V E V S Q A P L P P A P A Y L S S P L

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**BspLU11I (1797)**

1701 CCCTGCCAGCCAGAGGAGGAGCCCGAGGAGCCACCTGACTTCTGCTGTCCCAAGTGCCAGTATCAGGCCCTGATATGGACACCTGCAGATACA  
 380▶ A L P S Q R R S P P E E P P D F C C P K C Q Y Q A P D M D T L Q I H

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**BamHI (1819)**  
**NdeI (1859)**

1801 TGTCATGGAGTGCATTGAGGGATCCTATCCCTATGATGTGCCAGACTATGCTGGCTATCCATATGATGTTCTGATTATGCTGGATACCTTATGATGTG  
 413▶ V M E C I E G S Y P Y D V P D Y A G Y P Y D V P D Y A G Y P Y D V

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**MscI (1922)**  
**NheI (1916)**

1901 CCAGACTATGCCTAAAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGT  
 447▶ P D Y A •

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**HpaI (2054)**

2001 GAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGG

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**EcoRI (2150)**

2101 AGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATCTAAAATACAGCATAGCAAACTTAACTCCAATCAAGCCTCT  
 2201 ACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTCATGGAGTTA

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**SspI (2389)**

2301 AGATATAGTATTTTTCCAAGTTTGAAGTACTCTTCAATTTCTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTGTAGTAAATATTTCAGAA

Swal (2403)  
2401 ATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTAGTAGTTGGA  
2501 CTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGGATGAGTTCCTCAATGG  
141 • N R T Y K L P I L E E I T  
BstXI (2693)  
2601 TGGTTTTGACCAGCTTGCCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCCT  
127 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 V R  
2701 GATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCT  
94 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 I A  
StuI (2828)  
2801 TCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCCGACATGGTGCTTGT  
60 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 H K N  
BspHI (2978)  
BbsI (2974)  
XmnI (2970)  
2901 TGTCTCATAGAGCATGGTGATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCCTATAGTG  
27 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 (3036)  
3001 AGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCT  
SpeI (3191)  
3101 GCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGAAAGTCCCCTTGATTTACTAGTCA  
3200 AAACAACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATC  
SnaBI (3319)  
3300 ATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGGGGCCATTTACCGTCAT  
NdeI (3424)  
3400 TGACGTCAATAGGGGGCGTACTTGCCATATGATACACTTGATGTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGT  
3500 CCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGTCTGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTA  
SdaI (3602) PacI (3610) BspLU11I (3620)  
3600 ACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGGCCAGGAAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCCG  
3698 CCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGCTCCCTCG  
3798 TGGCTCTCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCAGCTGTAGGTATCT  
ApaLI (3934)  
3898 CAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCC  
3998 AACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGTAACAGGATTAGCAGAGCGAGGTATGTAGCGGTGCTACAGAGTCTTGAAGTGGT  
4098 GGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAA  
4198 ACAAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGG  
EagI (4370)  
PacI (4350) Swal (4359) NotI (4369)  
4298 TCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTC  
4398 ATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACATACGCTCTCCATCAAAACAAAACGAAAACAAAACAACTAGCAAATAGGCTGTCCCC  
4498 AGTGCAAGTGAGGTGCCAGAACATTTCTATCGAA