



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

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
 101 GAGAAGGTGGCGCGGGTAAACTGGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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**Psp1406I (203)**
**Bsu36I (291)**

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCCGCCGCCCTACCTGAGGCC  
 301 GCCATCCACGCGGTTGAGTGCCTGTTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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**NgoMIV (441)**  
**NaeI (441)**

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

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

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCCCTACCTGAGATCACCGGTGAGCATGCTGAAGAAGCAGTCTGCAGGGCTTGTGCTGTGGGG  
1▶ M L K K Q S A G L V L W G

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**Eco47III (682)**  
**AfeI (682)**

601 CGTATCCTCTTTGTGGCCTGGAATGCCCTGCTGCTCCTCTTCTTCTGAGCGCCAGCACCTGGCAGGCCACCCTCAGTCAGCGCTCTCGATGGCGAC  
 13▶ A I L F V A W N A L L L L F F W T R P A P G R P P S V S A L D G D

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**XmaI (718)**  
**XmaI (713)**
**BsrBI (757)**

701 CCCGCCAGCTCACCCGGGAAGTGATTCGCTGGCCAAAGACGCCGAGGTGGAGCTGGAGCGGCAGCTGGGCTGCTGCAGCAGATCGGGGATGCCCTGT  
 47▶ P A S L T R E V I R L A Q D A E V E L E R Q R G L L Q Q I G D A L

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**NgoMIV (867)**  
**NaeI (867)**

801 CGAGCCAGCGGGGAGGGTGCCACCGCGGCCCTCCCGCCAGCCGCGTGTGCCTGTGACCCCGCGCCGGCGGTATCCCATCCTGGTCATCGCCTG  
 80▶ S S Q R G R V P T A A P P A Q P R V P V T P A P A V I P I L V I A C  
 901 TGACCGCAGCACTGTTCCGGCGCTGGACAAGCTGCTGATTATCGGCCCTCGGCTGAGCTCTTCCCATCATCVITAGCCAGGACTGCGGCACGAG  
 113▶ D R S T V R R C L D K L L H Y R P S A E L F P I I V S Q D C G H E  
 1001 GAGACGGCCAGGCCATCGCTCTACGGCAGCGGGTACGCACATCCGGCAGCCGACCTGAGCAGATTGCGGTGCCGCCGACCACCGCAAGTTC  
 147▶ E T A Q A I A S Y G S A V T H I R Q P D L S S I A V P P D H R K F

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**BssHII (1117)**
**BbsI (1147)** **SacII (1169)**

1101 AGGGCTACTACAAGATCGCGCGCCACTACCGCTGGGCGCTGGGCCAGGTTCTCCGGCAGTTTCGCTTCCCGCGGCCGCTGGTGGTGGAGGATGACCTGGA  
 180▶ Q G Y Y K I A R H Y R W A L G Q V F R Q F R F P A A V V V E D D L E

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**SacI (1220)**

1201 GGTGGCCCCGGACTTCTTCGAGTACTTTCCGGCCACTATCCGCTGCTGAAGGCCAGCCCTCCCTGTGGTGCCTCGGCTGGAATGACAACGGCAAG  
 213▶ V A P D F F E Y F R A T Y P L L K A D P S L W C V S A W N D N G K  
 1301 GAGCAGATGGTGGACGCCAGCAGGCTGAGCTGCTTACCGCACCAGCTTTTTCCCTGGCCTGGGCTGGCTGCTGTTGGCCGAGCTCTGGGCTGAGCTGG  
 247▶ E Q M V D A S R P E L L Y R T D F F P G L G W L L L A E L W A E L

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**XcmI (1411)**  
**MscI (1408)**
**BglII (1481)**

1401 AGCCCAAGTGGCCAAAGGCTTCTGGGACGACTGGATGCGCGCGCCGAGCAGCGGCAGGGGGCGGCCTGCATACGCCCTGAGATCTCAAGAACGATGAC  
 280▶ E P K W P K A F W D D W M R R P E Q R Q G R A C I R P E I S R T M T

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**PaLI (1576)**

1501 CTTTGGCCGCAAGGGTGTGAGCCACGGGAGTCTTTGACCAGCACCTCAAGTTTATCAAGCTGAACCAGCAGTTTGTGCACTTACCCAGCTGGACCTG  
 313▶ F G R K G V S H G Q F F D Q H L K F I K L N Q Q F V H F T Q L D L  
 1601 TCTTACCTGCAGCGGGAGGCTATGACCAGATTTCTCGCCCGCTACCGTGTCTCCAGCTGCAGGTGGAGAAAGTGGAGCAATGACCGGAAGG  
 347▶ S Y L Q R E A Y D R D F L A R V Y G A P Q L Q V E K V R T N D R K

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**Bst1107I (1722)**

1701 AGCTGGGGAGGTGCGGGTGCAGTATACGGGACGGGACAGCTTCAAGGCTTTCGCCAAGGCTCTGGGTGTCATGGATGACCTTAAGTCGGGGTTCCGAG  
 380▶ E L G E V R V Q Y T G R D S F K A F A K A L G V M D D L K S G V P R

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**KasI (1854)**

1801 AGCTGGCTACCGGGTATTGTACCTTCCAGTTCGGGGCCCGCTGTCCACCTGGCGCCCCACCACGACGTGGGAGGGCTATGATCCTAGCTGGAATTAG  
 413▶ A G Y R G I V T F Q F R G R R V H L A P P P T W E G Y D P S W N •

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**MscI (1925)**  
**NheI (1919)**

1901 CACCTGCCTGCTTCTCTGGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTAAAAAATGCTTTATT

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**HpaI (2057)** **MfeI (2068)**

2001 TGTGAAATTTGTGATGCTATTGCTTTATTGTAACATTATAAGCTGCAATAACAAGTTAACAACAACAATTGCATTATTTATGTTTCAGGTTTCAGG

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**EcoRI (2153)**

2101 GGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTCAAAATACAGCATAGCAAACTTTAACCTCCAAATCAAGCC  
 2201 TCTACTTGAATCCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTCATGGAGT

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**SspI (2392)**

2301 TTAAGATATAGTATTTTCCCAAGTTTGAAGTACTCTTCATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAAATTTCA

SwaI (2406) EcoO109I (2467)  
 2401 GAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTT  
 2501 GGACTTAGGGAACAAAGGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGGTGTACTTGAGGGGGATGAGTTCCTCAA  
 141 • N R T Y K L P I L E E I  
 2601 TGGTGGTTTTGACCAGCTTGCCATTTCATCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTGACATGCCACAGGGGCTGACCAC  
 128 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 V  
 2701 CCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCACAGCAGACCCAATGGCAATG  
 95 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 I  
 2801 GCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGATGGCCGCCCGACATGGTGTCT  
 61 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 H K  
 BspHI (2981)  
 BbsI (2977)  
 XmnI (2973)  
 2901 TGTTGTCCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCCTATA  
 28 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 (3039)  
 3001 GTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACGCGTGGATGGCGTCTCCAGCTATCTGACGGTTCACTAAACGAGC  
 SpeI (3194)  
 3101 TCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAG  
 3200 TCAAAACAAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATC  
 SnaBI (3322)  
 3300 ATCATGGTAATAGCGATGACTAATCGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGCATAATGCCAGGCGGGCCATTTACCGT  
 NdeI (3427)  
 3400 CATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGTACTGTTGCAAGTGGCGAGTTTACCGTAAATACTCCACCATTGACGTCAATGGAA  
 3500 AGTCCCTATTGGCGTTACTATGGGAACATACGTCAATTATTGACGTCAATGGGCGGGGGTCTGTTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAAGTTAT  
 SdaI (3605) PacI (3613) BspLU11I (3623)  
 3600 GTAACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCTTGGTGGCGTTTTTCCATAGGCTC  
 3698 CGCCCCCTGACGAGCATCAGAAAATCGACGCTCAAGTCAGAGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCC  
 3798 TCGTGGCTCTCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTTCTCCCTCGGAAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTA  
 ApaLI (3937)  
 3898 TCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCGTTTACGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAG  
 3998 TCCAAACCCGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGGGTGCTACAGAGTCTTGAAGT  
 4098 GGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGG  
 4198 CAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACG  
 PacI (4353) SwaI (4362) NotI (4372)  
 4298 GGGTCTGACGCTCAGTGGAAACGAAAACACGTTAAGGGATTTTGGTGTGCTAGTTAATTAACATTTAAATCAGCGGCCGAATAAAAATATCTTTATT  
 4398 TTCATTACATCTGTGTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTG  
 4498 CCCAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA