



**PvuI (7)**  
**SgfI (6)**  
1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

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101 GAGAAGGTGGCGCGGGTAAACTGGAAAAGTATGTCGTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCGTATATAAGTGCAGTAGTCGCC

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**Psp1406I (203)** **HindIII (245)** **Bsu36I (291)**  
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCCTTCACGCGCCCGCCCTACCTGAGGCC

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301 GCCATCCACGCCGGTTGAGTCGCGTTCTGCCGCTCCCGCTGTGGTGCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

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401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

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**BstEII (555)**  
**AgeI (552)** **NcoI (560)**  
501 TCTGTTCTGCGCGTTACAGATCCAAGCTGTGACCGGCGCTACCTGAGATCACCGGTACCATGGCCGCCCTGCAGAAATCTGTGAGCTCTTTCCTTAT

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MscI (608) **SandI (601)** **EcoO109I (601)**  
601 GGGGACCTGGCCACCAGCTGCCTCCTTCTCTTGGCCCTTTGGTACAGGGAGGAGCAGCTGCGCCATCAGCTCCCACTGCAGGCTTGACAAGTCCAAC

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13▶ G T L A T S C L L L L A L L V Q G G A A A P I S S H C R L D K S N  
**NheI (748)** **PshAI (772)** **XmnI (792)**  
701 TTCAGCAGCCCTATATACCAACCGCACCTTCATGCTGGCTAAGGAGGCTAGCTTGGCTGATAACAACACAGACGTTTCGTCTCATTGGGGAGAACTGT

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47▶ F Q Q P Y I T N R T F M L A K E A S L A D N N T D V R L I G E K L  
**Eco47III (821)**  
801 TCCACGGAGTCAGTATGAGTGAGCGCTGCTATCTGATGAAGCAGGTGCTGAACCTCACCCCTGAAGAAGTGTGTTCCCTCAATCTGATAGTTCCAGCC

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80▶ F H G V S M S E R C Y L M K Q V L N F T L E E V L F P Q S D R F Q P  
**MscI (926)** **BspLU11I (952)**  
901 TTATATGCAGGAGGTGGTGCCTTCTGGCCAGGCTCAGCAACAGGCTAAGCACATGTATATTGAAGGTGATGACCTGCATATCCAGAGGAATGTGCAA

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113▶ Y M Q E V V P F L A R L S N R L S T C H I E G D D L H I Q R N V Q  
**HindIII (1021)**  
1001 AAGCTGAAGGACACAGTGAAAAAGCTTGAGAGAGTGGAGAGATCAAAGCAATTGGAGAAGTGGATTTGCTGTTTATGTCTCTGAGAAATGCCTGCATTT

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147▶ K L K D T V K K L G E S G E I K A I G E L D L L F M S L R N A C I  
**NheI (1187)**  
1101 GACCAGAGCAAAGCTGAAAAATGAATAACTAACCCCTTTCCCTGCTAGAAATAACAATTAGATGCCCAAAGCGATTTTTGAATTCGCTAGCTCGACAT

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180▶ •  
1201 GATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTGAAA

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**HpaI (1350)**  
1301 TTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACCAATTGCATTCATTTATGTTTCAGGTTCCAGGGGAGGT

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**EcoRI (1446)**  
1401 GTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACCTTAACTCCAATCAAGCCTCTACTT

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1501 GAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTGCAGCCTCACCTTCTTCATGGAGTTTAAGAT

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**SapI (1628)** **SspI (1685)** **SwaI (1699)**  
1601 ATAGTGTATTTTCCCAAGGTTTGAACACTGCTCTTCATTTCTTTATGTTTTAAATGCAGTACCTCCACATTCCTTTTTAGTAAAATATTCAGAAATAA

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**EcoO109I (1760)**  
1701 TTTAAATACATCATTGCAATGAAAAATAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTAGTAGTTGGACTTA

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1801 GGAACAAAGGAACCTTAAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTGTTACTTGGGGGATGAGTTCCTCAATGGTGGT

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141▶ • N R T Y K L P I L E E I T T  
**BstXI (1989)**  
1901 TTTGACCAGCTTGCCATTCATCTCAATGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATG

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126▶ 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 I  
2001 GATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCCGTTGCTCAGCAGACCCAATGGCAATGGCTTCAG

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92▶ 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 E A  
**StuI (2124)**  
2101 CACAGACAGTGACCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCACTTGGTCTGATGGCCGCCCGACATGGTCTTGTGTGC

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59▶ 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 D  
**BbsI (2270)**  
**XmnI (2266)**  
2201 CTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGTCTTCATGGTGGCCCTCTATAGTGAGTC

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26▶ 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

2301 **AseI (2332)**  
 GTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTT

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2401 **SpeI (2487)**  
 ATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTACGACATTTTGAAAAGTCCCGTTGATTTACTAGTCAAACA

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2501 AACTCCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGT

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2601 **SnaBI (2615)**  
 AATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCCATAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACG

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2701 **NdeI (2720)**  
 TCAATAGGGGGCTACTTGCCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTA

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2801 **SdaI (2898)**  
 TTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGGTCTGGGCGGTGAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCC

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2901 **PacI (2906) BspLU11I (2916)**  
 TGCAGGTTAATTAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGGCGTTTTTCCATAGGCTCCGCCCCCTG

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3001 **PacI (2906) BspLU11I (2916)**  
 ACGAGCATCACAATAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAGGCGTTTCCCCTGGAAGCTCCCTCGTGGCTC

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3101 **PacI (2906) BspLU11I (2916)**  
 TCCTGTTCCGACCCTGCCGTTACCGGATACCTGTCCGCTTCTCCCTTCGGGAAGCGTGGCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCCG

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3201 **ApaLI (3230)**  
 GTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGACGAAACCCCGTTCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGG

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3301 **ApaLI (3230)**  
 TAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAA

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3401 **ApaLI (3230)**  
 CTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAAC

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3501 **ApaLI (3230)**  
 ACCGCTGGTAGCGGTGGTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACG

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3601 **EagI (3666)**  
**PacI (3646) SwaI (3655) NotI (3665)**  
 CTCAGTGAACGAAAACCTACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGGCCGCAATAAAATATCTTTATTTTCATTACAT

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3701 **EagI (3666)**  
 CTGTGTGTTGGTTTTTTGTGTGAATCGTAACATAACGCTCTCCATCAAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGTGCAA

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3801 **EagI (3666)**  
 GTGCAGGTGCCAGAACATTTCTCTATCGAA