



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

1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA  
101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGTGTCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

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

201 GTGAACGTTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACGCGCCCGCCCTACCTGAGGCC  
301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCCCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCCGCCGTCTAGGTAAGTTAAAGCTCAGGTCGAGACC

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

401 GGGCCTTTGTCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTGGCTGACCCTGCTTGTCTCAACTCTACGCTTTGTTTCGTTT

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**KasI (535)**
**BstEII (555)**  
**AgeI (552)**
**NcoI (560)**

501 TCTGTTTTCGCGGTTACAGATCCAAGCTGTGACCGCGGCTACCTGAGATCACCGGTACCATTGGCGGAGCTGAATCCTTGGCCGAGGAGCTGTCTGT  
1MeTAl aGl uLeuAsnProLeuAl aGl uGl uLeuSer Cy

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**DraIII (636)**
**PshAI (678)**
**Bsp120I (693)**

601 CTCCGTCTGCCTGGAGCTTCAAGGAACCTGTACCACCCGTCGCCGACAACTTCTGCACGTATGCCTGGATGAGACGTGGTTCGTCAGGCCCGG  
13sSer Val CysLeuGl uLeuPheLysGl uProVal Thr Thr P roCysGl yHi sAs nPheCysThr Ser CysLeuAspGl uThr TrpVal Val Gl nGl yPro

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**PstI (790)**  
**SdaI (789)**

701 CCGTACCAGTCCCGCAATGTGCGAAAGTGTACCAGTGCGCCCGCAGCTGCAAAGAACACGGTAATGTGCGCGGTGGTGGAGCAGTTCCTGCAGGCCG  
47ProTyrArgCysProGl nCysArgLysVal TyrGl nVal ArgProGl nLeuGl nLysAsnThr Val MetCysAl aVal Val Gl uGl nPheLeuGl nAl aG  
801 AGCAGGCGCGACCCCGTGGACGACTGGACGCTCCTGCCGCTTCTCCGCTCCAGCGCAGCCACCCAGGTGGCTGCGACCACTGCCTGACGGAGAT  
80I uGl nAl aArgThr ProVal AspAspTrpThr ProProAl aArgPheSer Al aSer Ser Al aAl aThr Gl nVal Al aCysAspHi sCysLeuThr Gl uI I

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**StuI (952)**  
**Eco147I (952)**

901 CGCAGTGAAGACGTGCTCGTGTGCATGGCCTCTTTCTGCCAGGAGCCTTGGGCTCACTTCGACAGTCCGGCCTTCCAGGATCACCCCTACAGTCG  
113eAl aVal LysThr CysLeuVal CysMetAl aSer PheCysGl nGl uHi sLeuArgProHi sPheAspSer ProAl aPheGl nAspHi sProLeuGl nSer

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**EcoRI (1051)**

1001 CCCATCGTGACCTTCTGCGCCGAAATGTACCCAGCACAAACCGCTTCCGGAATCTTTTGTCCGAGCATGGCGAGTGCATCTGCCATATCTGCTTGG  
147ProI eArgAspLeuLeuArgArgLysCysThr Gl nHi sAsnArgLeuArgGl uPhePheCysP roGl uHi sGl yGl uCysI l eCysHi sI l eCysLeuV

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**XcmI (1139)**

1101 TAGAGCACAAAGACCTGCTCCCTACGACCTAAGTCAAGCCAGCGCCGACCTGGAGTACAAACTGAGGAATAAACTCACTATCATGCACAGCCACATCAA  
180aI Gl uHi sLysThr CysSer ProThr Thr LeuSer Gl nAl aSerAl aAspLeuGl uTyrLysLeuArgAsnLysLeuThr I l eMe tHi sSer Hi sI l eAs  
1201 TGGGCAACCAAGCATTGGAGGATGTGAGATCCAAGCAACAGTGTGTGCAGGATCTATGAAGAGGAAGATGGAACAGCTGAGACAGGATATATGGAA  
213nGl yAl aThr LysAl aLeuGl uAspVal ArgSer LysGl nGl nCysVal Gl nAspSer Me tLysArgLysMetGl uGl nLeuArgGl nGl uTyrMetGl u

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**FspI (1337)**

1301 ATGAAGGCTGTCATCGACGAGCAGAGACCAGCTCCTTGCAGGTTGAAGGAGGAGGAGAAGAGAGTCTACGGAAAATTCGACACCATCTACCAGGTTCT  
247MetLysAl aVal I l eAspAl aAl aGl uThr Ser Ser LeuArgAr gLeuLysGl uGl uGl uLysArgVal TyrGl yLysPheAspThr I l eTyrGl nVal L  
1401 TCGTCAAGAAGAAGAGTGTGATGCAGAACTGAAGCGAGGTTGAGCTCATTATGGACAAAGGGGATGAGTTTGTGTTCTGGAGAAAAGCTGCAAAAT  
280euVal LysLysLysSer Gl uMetGl nLysLeuLysAl aGl uVal Gl uLeuI l eMe tAspLysGl yAspGl uPheGl uPheLeuGl uLysAl aAl aLysLe

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**PagI (1548)**  
**BsiBI (1540)**  
**BsaBI (1540)**  
**BglII (1539)**
**BspHI (1548)**

1501 GCAAGGAGAGTCAACAAAACAGTCTACATCCCTAAGATAGATCTGGATCATGATTTGATAATGGAAATCTACCAAGGGCGCGGACCTCAAGAGTGAA  
313uGl nGl yGl uSer Thr LysProVal TyrI l eProLysI l eAspLeuAspHi sAspLeuI l eMe tGl yI l eTyrGl nGl yAl aAl aAspLeuLysSer Gl u

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**Tth111I (1671)**

1601 CTGAAGCACTCCATTAAGAAGCTACAGAAGAAGTCTGAGGAGCACAATGGCTCAGGTAACAAGGGAGACCAGACAGTCCACTTTTAAACCCGTACAAC  
347LeuLysHi sSer I l eLysLysLeuGl nLysLysSer Gl uGl uHi sAsnGl ySer Gl yAsnLysGl yAspGl nThr Gl nSer Thr PheLysProVal Gl nP

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**BstBI (1701)**  
**Bsp119I (1701)**  
**AsuII (1701)**

1701 CTTCAAGAAGACATTCAAGAAAAGAAGACCAAGAAAACCCCTGTTGCTCCCGCCCTCCCTCCACTTCTCACCCAAACAGTTGCCACCTTTGGAGC  
380roSer LysLysThr I l eGl nGl uLysLysThr LysLysThr ProValAl aProGl yProProSer Hi sPheSer ProAsnLysLeuProThr PheGl yAl

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**MscI (1803)**  
**BalI (1803)**

1801 TCCTGGCCAATCACTGGATTCAAAGCAACTTCCCTGATGCCGACCCAAAGCCAGTGTGCACAGCCAGACTCTATAGGAGTCAAGGCTAAGGTGCTA  
413aProGl yGl nSer LeuAspSer LysAl aThr Ser ProAspAl aAl aProLysAl aSer Al aAl aGl nProAspSer I l eGl yVal LysAl aLysVal l eLeu  
1901 GAAAACCTCTTAACCAAGTCCAGAACGGAGCTTCTGGAGTATTTCTGTAAGTCTATCTTGACTACAATACCGCCACAAACAAAGTGTCTGTCAAACA  
447Gl uAsnPheLeuThr LysSer ArgThr Gl uLeuLeuGl uTyrPheVal LysVal I l ePheAspTyrAsnThr Al aHi sAsnLysVal Ser LeuSerAsnL

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**AgeI (2039)**

2001 AGTACACCACCGCTCTGTGTCTGATGGGCTCCAGCACTACCGGTCCCATCCCCAGAGGTTACCTACTGCTCTCAGGCTCTGGGCTGCACTGCTACAA  
480ysTyrThr Thr Al aSer Val Ser AspGl yLeuGl nHi sTyrArgSer Hi sProGl nArgPheThr TyrCysSer Gl nVal l eLeuGl yLeuHi sCysTyrLy

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**XmnI (2136)**
**NgoMIV (2195)**  
**Bsp120I (2184)**
**NaeI (2195)**

2101 GAATGGCATTCACTACTGGGAGGTGGAACACAGAAGAACAATCTGCGGCGTAGGCATCTGCTACGGCAGCATGGAACGGCAGGGCCCGAGAGCCGG  
513sAsnGl yI l eHi sTyrTrpGl uVal Gl uLeuGl nLysAsnAsnPheCysGl yVal Gl yI l eCysTyrGl ySer Me tGl uArgGl nGl yProGl uSer Arg

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**BglII (2246)**

2201 CTGGGCGCAACCCAACTCATGGTGTGTGGAGTGGTTCAATAACAAGATCTCCGCTGGCACAACAAGTGGAGAAGACTCTGCCCTCCACCAAGGCCA  
547LeuGl yArgAsnProAsnSer TrpCysVal Gl uTrpPheAsnAsnLysI l eSer Al aTrpHi sAsnAsnVal Gl uLysThr LeuProSer Thr LysAl aT

