



150

SdaI (7)

1 CCTGCAGGGCCGCTGCTCGGGAGGCTGAGGCAGGAGAATCACTTGAACCAGGGAGGCAGAGTTGTGGTGAGCAGAGATCGGCCATTGCTCTCCAGCCT
101 GGGCAACAAGAGCAAAAGTTTCGTTTAAAAAAAAAAAAAAAAAGTCCTTTTCGATGTGACTGTCTCCTCCCAAATTTGTAGACCCTCTTAAGATCATGCTTTTCA
201 GATACTTCAAAGATTCCAGAAGATATGCCCGGGGGTCTCGAAGCCACAAGGTAACAACAACATCCCCCTCCTTGACTATCAATTTTACTAGAGGAT
301 GTGGTGGGAAAACCATTATTTTGATATTAACAATAAGGCTTGGGATGGAGTAGGATGCAAGCTCCCAGGAAAAGTTAAGATAAAACCTGAGACTTAAA
401 AGGGTGTAAAGAGTGGCAGCCTAGGGAATTTATCCGGACTCCGGGGAGGGGGCAGAGTACCAGCCTCTGCATTTAGGGATTCTCCGAGGAAAAGTGT
501 GAGAACGGCTGCAGGCAACCCAGGCGTCCCGGCTAGGAGGGACGCCACCCAGGCTGCGGGAAGAGAGGGAGAAAGTGAAGCTGGGAGTTGCCACTCCC
601 AGACTTGTGGAATGCAGTTGGAGGGGGCAGCTGGGAGCGCCTTGTCTCCCAATCACAGGAGAAGGAGGAGGTGGAGGAGGAGGGCTGCTTGGGAAGT
701 ATAAGAATGAAGTTGTGAAGCTGAGATTCCCCTCCATTGGGACCGGAGAAACCAGGGGAGCCCCCGGGCAGCGCGGCCCTTCCACGGGGCCCTTT
801 ACTGCGCCGCGCGCCCGCCCCACCCCTCGCAGCACCCCGCGCCCGCCCTCCAGCCGGTCCAGCCGAGCCGTGGGGCCGGAGCCGACGTGAGC

NeoI (903)

901 ACCATGGGGGTTCTCATCATCATCATCATCATGGTATGGCTAGCATGACTGGTGGACAGCAATGGGTCGGATCTGTACGACGATGACGATAAGGTAC
MetGlyGlySerHisHisHisHisHisGlyMetAlaSerMetThrGlyGlyGlnGlnMetGlyArgAspLeuTyrAspAspAspLysValP
1001 CTAAGGATCAGCTTGGAGTTGATCCCGTCGTTTTACAACGTCGTGACTGGGAAAACCTGGCGTTACCCAACCTAATCGCCTGCAGCACATCCCCCTT
33 roLysAspGlnLeuGlyValAspProValValLeuGlnArgArgAspTrpGluAsnProGlyValThrGlnLeuAsnArgLeuAlaAlaHisProProPh
1101 CGCCAGCTGGCTAATAGCGAAGAGGCCCGCACCGACTCGCCCTCCCAACAGTTGGCAGCCTGAATGGCGAATGGCGCTTTGCCTGGTTCCCGGCACCA
66 eAlaSerTrpArgAsnSerGluGluAlaArgThrAspArgProSerGlnGlnLeuArgSerLeuAsnGlyGluTrpArgPheAlaTrpPheAlaPro
1201 GAAGCGGTGCCGAAAGCTGGCTGGAGTGGATCTTCTGAGGCCGATACTGCTGCTGCCCTCAAACCTGGCAGATGCACGGTTACGATGCGCCCATCT
100 GluAlaValProGluSerTrpLeuGluCysAspLeuProGluAlaAspThrValValValProSerAsnTrpGlnMetHisGlyTyrAspAlaProl leT
1301 ACACCAACGTAACCTATCCATTACGGTCAATCCGCGGTTTGTTCACGGAGAATCCGACGGGTTGTTACTCGCTCACATTAATGTTGATGAAAGCTG
133 yrThrAsnValThrTyrProl leThrValAsnProProPheValProThrGluAsnProThrGlyCysTyrSerLeuThrPheAsnValAspGluSerTr
1401 GCTACAGGAAGCCAGACGCGAATTATTTTGGTGGCTTAACTCGCGCTTTCATCTGTGGTGAACGGCGCTGGGTCGTTACGGCCAGGACAGTCTG
166 pLeuGlnGluGlyGlnThrArgI leI lePheAspGlyValAsnSerAlaPheHisLeuTrpCysAsnGlyArgTrpValGlyTyrGlyGlnAspSerArg
1501 TTGCCGTCTGAATTTGACCTGAGCGCATTTTTACGCGCCGGAGAAAACCGCCTCGCGGTGATGGTGTGCGTTGGAGTGACGGCAGTTATCTGGAAGATC
200 LeuProSerGluPheAspLeuSerAlaPheLeuArgAlaGlyGluAsnArgLeuAlaValMetValLeuArgTrpSerAspGlySerTyrLeuGluAspG
1601 AGGATATGTGGCGGATGAGCGCATTTTCCGTGACGCTCTGTTGCTGCATAAACCGACTACACAATCAGCGATTCCATGTTGCCACTCGCTTAATGA
233 InAspMetTrpArgMetSerGlyI lePheArgValSerLeuGlnGlnLeuHisLysProThrTrpGlnI leSerAspPheHisValAlaThrGlnGlyPhe
1701 TGATTTACGCGCGCTGTACTGGAGGCTGAAGTTGAGATGTGCGCGGAGTTGCGTACTACCTACGGGTAACAGTTTCTTTATGGCAGGGTGAACCGCAG
266 pAspPheSerArgAlaValLeuGluAlaGluValGlnMetCysGlyGluLeuArgAspTyrLeuArgValThrValSerLeuTrpGlnGlyGluThrGln
1801 GTCGCCAGCGCCACCGCCTTTCGGCGGTGAATTTATCGATGAGCGTGGTGGTTATGCCGATCGCGTCACACTACGCTGAACGTCGAAAACCCGAAAC
300 ValAlaSerTrpAlaProPheGlyGlyGluI leI leAspGluArgGlyGlyTyrAlaAspArgValThrLeuArgLeuAsnValGluAsnProLysL
1901 TGTGAGCGCGAAATCCGAATCTCTATCGTGGCTTGAAGTGAACCGCCGACCGCGGACGCTGATTGAAGCAGAAGCCTGCGATGTCGGTTTTCCG
333 euTrpSerAlaGluI leProAsnLeuTyrArgAlaValValGluLeuHisThrAlaAspGlyThrLeuI leGluAlaGluAlaCysAspValGlyPheAr
2001 CGAGGTGCGGATTGAAAATGGTCTGCTGCTGCTGAACGGCAAGCCGTTGCTGATTGAGGCGTTAACCGTCACGAGCATCATCTCTGCATGTCAGGTC
366 gGluValArgI leGluAsnGlyLeuLeuLeuLeuAsnGlyLysProLeuLeuI leArgGlyValAsnArgHisGluHisHisProLeuHisGlyGlnVal
2101 ATGGATGAGCAGCAGATGGTGCAGGATATCCTGCTGATGAAGCAGAACACTTAAACCGCGTGGCTGTTCCGATTATCCGAACCATCCGCTGTGGTACA
400 MetAspGluGlnThrAlaMetValGlnAspI leLeuLeuMetLysGlnAsnAsnPheAsnAlaValArgCysSerHisTrpProAsnHisProLeuTrpTyrT
2201 CGCTGTGCGACCGCTACGGCTGTATGTTGGTGGATGAAGCAATATTGAAACCCACGGCATGGTCCAATGAATCGTCTGACCGATGATCCGCGCTGGCT
433 hrLeuCysAspArgTyrGlyLeuTyrValValAspGluAlaAsnI leGluThrHisGlyMetValProMetAsnArgLeuThrAspAspProArgTrpLe
2301 ACCGGCATGAGCGAACCGGTAACCGGAATGGTGCAGCGCATCGTAATCACCCGAGTGTGATCATCTGGTCTGGGGAATGAATCAGGCCACGGCGCT
466 uProAlaMetSerGluArgValThrArgMetValGlnArgAspArgAsnHisProSerValI leI leTrpSerLeuGlyAsnGluSerGlyHisGlyAla
2401 AATCAGCAGCGCTGTATCGTGGATCAAATCTGTGCATCTTCCCGCCGTCAGTATGAAGCGCGGAGCCGACACCAGGCCACCGCATATTATTT
500 AsnHisAspAlaLeuTyrArgTrpI leLysSerValAspProSerArgProValGlnTyrGluGlyGlyGlyAlaAspThrThrAlaThrAspI leI leC
2501 GCCGATGTACGCGCGCTGGATGAAGACCAGCCCTTCCCGCTGTGCCGAATGGTCCATCAAAAAATGGCTTTCCGTACCTGGAGAGACGCGCCCGCT
533 ysProMetTyrAlaArgValAspGluAspGlnProPheProAlaValProLysTrpSerI leLysLysTrpLeuSerLeuProGlyGluThrArgProLe
2601 GATCCTTTGGAATACGCCACCGCATGGGTAACAGTCTTGGCGTTTCCGTAATACTGGCAGGCGTTCCGTCAGTATCCCGTTTACAGGGCGGCTTC
566 ul leLeuCysGluTyrAlaHisAlaMetGlyAsnSerValSerLeuGlyGlyPheAlaLysTyrTrpGlnAlaPheArgGlnTrpArgLeuGlnGlyPhe
2701 GTCTGGGACTGGTGGATCAGTCGCTGATTAATATGATGAAAACGGCAACCCGTTGCGCTTACGGCGGTGATTTTGGCGATACGCCAAGCAGTCGCC
600 ValTrpAspTrpValAspGlnSerLeuI leLysTyrAspGluAsnGlyAsnProTrpSerAlaTyrGlyGlyAspPheGlyAspThrProAsnAspArgG
2801 AGTTCTGTATGAACGGTCTGGTCTTTGCCGACCGCACGCCGATCCAGCGCTGACGGAAGCAAAACACCAGCAGCAGTTTTTCCAGTTCCGTTTATCCGG
633 InPheCysMetAsnGlyLeuValPheAlaAspArgThrProHisProAlaLeuThrGluAlaSerHisGlnGlnPhePheAlaGlnPheArgLeuAla
2901 GCAAACCATCGAAGTACCAGGCAATACCTGTTCCGCTATAGCGATAACAGCTCTCCGACTGGATGGTGGCGCTGGATGGTAAGCCGTCGCAAGCGGT
666 yGlnThrI leGluValThrSerGluTyrLeuPheArgHisSerAspAsnGluLeuLeuHisTrpMetValAlaLeuAspGlyLysProLeuAlaSerGly
3001 GAAGTGCCTCTGGATGTCGCTCCACAAGGTAACAGTTGATTGAACTGCCTGAACTACCGCAGCCGGAGAGCGCCGGCACTCTGGCTCACAGTACGGG
700 GluValProLeuAspValAlaProGlnGlyLysGlnLeuI leGluLeuProGluLeuProGlnProGluSerAlaGlyGlnLeuTrpLeuThrValArgV
3101 TAGTGCAACCGAACCGACCGCATGGTCAGAAGCCGGCACATCAGCGCTGGCAGCAGTGGCGTCTGGCGGAAAACCTCAGTGTGACGCTCCCCCGCG
733 alValGlnProAsnAlaThrAlaTrpSerGluAlaGlyHisI leSerAlaTrpGlnGlnTrpArgLeuAlaGluAsnLeuTrpArgLeuAlaGlnGlyPhe
3201 GTCCACGCCATCCCGCATCTGACCACCAGGAAATGGATTTTTGCATCGAGCTGGTAATAAGCGTTGGCAATTTAACCGCCAGTCAGGCTTTCTTTCA
766 aSerHisAlaI leProHisLeuThrThrSerGluMetAspPheCysI leGluLeuGlyAsnLysArgTrpGlnPheAsnArgGlnSerGlyPheLeuSer
3301 CAGATGTGGATTGGCGATAAAAAACAACCTGCTGACGCGCTGCGCGATCAGTTACCCGTCGACCGCTGGATAACGCAATTTGGCGTAAGTGAAGCGCCC
800 GlnMetTrpI leGlyAspLysLysGlnLeuLeuThrProLeuArgAspGlnPheTrpArgAlaGlnProLeuAsnAspI leGlyValSerGluAlaThrA
3401 GCATTGACCTAACCGCTGGTTCGAACCGTGAAGGGCGGGCCATTACCAGCCGGAAGCAGCGTTGTTGACAGTGCACCGCAGATACACTTGTCTGATGC
833 rgI leAspProAsnAlaTrpValGluArgTrpLysAlaAlaGlyHisTyrGlnAlaGluAlaAlaLeuLeuGlnCysThrAlaAspThrLeuAlaAspAl
3501 GGTGCTGATTACGACCGCTCAGCGTGGCAGCATCAGGGAAAACCTATTTATCAGCCGAAAACCTACCGGATTGATGGTGTAGTGGTCAAATGGCGATT
866 aValLeuI leThrThrAlaHisAlaTrpGlnHisGlnGlyLysThrLeuPheI leSerArgLysThrTyrArgI leAspGlySerGlyGlnMetAlaI le

3601 ACCGTTGATGTTGAAGTGGCGAGCGATACACCGCATCCGGCGGGATTTGGCCTGAACTGCCAGCTGGCGCAGGTAGCAGAGCGGGTAAACTGGCTCGGAT  
 900 ThrValAspValGluValAlaSerAspThrProHisProAlaArgI leGlyLeuAsnCysGlnLeuAlaGlnValAlaGluArgValAsnTrpLeuGlyL  
 3701 TAGGGCCGAAGAAAATATCCCAGCCGCTTACTGCCGCTGTTTTGACCGCTGGGATCTGCCATTGTCAGACATGTATACCCCGTACGCTTCCCGAG  
 933 euGlyProGlnGluAsnTyrProAspArgLeuThrAlaAlaCysPheAspArgTrpAspLeuProLeuSerAspMetTyrThrProTyrValPheProSe  
 3801 CGAAAACGGTCTGCGCTGCGGGACGCGGAATTGAATTATGGCCACACCAGTGGCGCGGGACTTCCAGTTCAACATCAGCCGCTACAGTCAACAGCAA  
 966 rGluAsnGlyLeuArgCysGlyThrArgGluLeuAsnTyrGlyProHisGlnTrpArgGlyAspPheGlnPheAsnI leSerArgTyrSerGlnGlnGln  
 3901 CTGATGGAAACCAGCCATCGCCATCTGCTGCACGCGGAAGAAGGCACATGGCTGAATATCGACGGTTTCCATATGGGGATTGGTGGCGACGACTCTGGGA  
 1000 LeuMetGluThrSerHisArgHisLeuLeuHisAlaGluGluGlyThrTrpLeuAsnI leAspGlyPheHisMetGlyI leGlyGlyAspAspSerTrpS  
 4001 GCCCGTCAGTATCGGCGAATTACAGCTGAGCGCCGGTCTGCTACCATTACCAGTTGGTCTGGTGTCAAAAATAATAATCTAGTTCGAGAATTCGCTAGCTC  
 1033 erProSerValSerAlaGluLeuGlnLeuSerAlaGlyArgTyrHisTyrGlnLeuValTrpCysGlnLys•••  
 4101 GACATGATAAGATACATTGATGAGTTTGGACAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTTGTGAAATTTGTGATGCTATTGCTTTATTG  


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 4201 TGAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTCCAGGGG  


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*PacI* (4369)

 4301 GAGGTGTGGAGGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTAGATCCATTTAAATGTTAATTAAGTACGACATGACCAAAATCCCTTAACGTGA  


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 4401 GTTTTCGTTCCACTGAGCGTCAGACCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCTGCGCGTAATCTGTGCTTGCACAAAAA  


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 4501 CCACCGCTACCAGCGTGGTTTTGTTTCCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAAATACTGTTT  


---

 4601 TTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAAGTCTGTAGCACCGCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGG  


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 4701 CGATAAGTCGTGCTTACCAGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTGCGGGTGAACGGGGGTTCTGTGCACACAGCCAGCTTG  


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 4801 GAGCGAACCGACTACACCGAAGTACAGGATACCTACAGCGTGTGAGCTATGAGAAAGCGCCAGCTTCCCGAAGGGAGAAAGCGGACAGGTATCCGGTAAGCG  


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 4901 GCAGGGTCGGAACAGGAGAGCGCAGAGGGAGCTTCCAGGGGAAACGCCTGATCTTTATAGTCCTGTGCGGGTTTCGCCACTCTGACTTGAGCGTGG  


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 5001 ATTTTTGTGATGCTCGTCAGGGGGCGGAGCCTATGGAAAAACGCCAGCAACCGCGCCTTTTTACGGTTCCTGGCCTTTTGTGCGCTTTTGTGCACATG  


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*PacI* (5109)

 5101 TTCTTAATTAATTTTTCAAAGTAGTTGACAATTAATCATCGGCATAGTATATCGGCATAGTATAATACGACTCACTATAGGAGGGCCATCATGGCCAA  


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1 MetAlaLy

 5201 GTTGACCAGTGTGCTCCAGTGTCCAGCCAGGGATGTGGCTGGAGCTGTTGAGTTCTGGACTGACAGGTTGGGGTCTCCAGAGATTTTGTGGAGGAT  
 3 sLeuThrSerAlaValProValLeuThrAlaArgAspValAlaGlyAlaValGluPheTrpThrAspArgLeuGlyPheSerArgAspPheValGluAsp  
 5301 GACTTTGACGTTGCTCAGAGATGATGTCACCCTGTTATCTCAGCAGTCCAGGACCAGTGGTGCCTGACAACACCCTGGCTTGGGTGTGGGTGAGAG  
 37 AspPheAlaGlyValValArgAspAspValThrLeuPheI leSerAlaValGlnAspGlnValValProAspAsnThrLeuAlaTrpValTrpValArgG  
 5401 GACTGGATGAGCTGTATGCTGAGTGGAGTGGTGGTCTCCACCACTTCAGGGATGCCAGTGGCCCTGCCATGACAGAGATTGGAGAGCAGCCCTGGGG  
 70 lyLeuAspGluLeuTyrAlaGluTrpSerGluValValSerThrAsnPheArgAspAlaSerGlyProAlaMetThrGluI leGlyGluGlnProTrpGl  
 5501 GAGAGAGTTTGCCTGAGAGACCCAGCAGGCAACTGTGTGCACTTTGTGGCAGAGGAGCAGGACTGAGGATAAGAATTGTAACAAAAAACCCTGCCCGG  
 103 yArgGluPheAlaLeuArgAspProAlaGlyAsnCysValHisPheValAlaGluGlnInsp•••  

*PacI* (5618)

 5601 CGGGGTTTTTTGTTAATTAA  


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