

PstI (7) SpeI (14)

1 C**CTG**CAGGGCCCACTAGTTTCATCACCACCGCCACCCCGCCCGCCCGCCATCTGAAAGGGTTCTAGGGGATTTGCAACCTCTCTCGTGTGTTTCTTC
101 TTCCGAGAAGCGCCGCCACACGAGAAAGCTGGCCGCGAAAGTCGTGCTGGAATCACTTCCAACGAAACCCAGGCATAGATGGGAAAGGGTGAAGAACA
201 CGTTGCCATGGCTACCGTTTCCCGGTCACGGAATAAACGCTCTCTAGGATCCGGAAGTAGTTCCGCGCGACCTCTCTAAAAGGATGGATGTTTCTCT
301 GCTTACATTCATTGGACGTTTTCCCTTAGAGGCCAAGGCCGCCAGGCAAAGGGGGCGTCCACGCGTGAGGGGCCCGGAGCCATTTGATTGGAGAAA
401 AGCTGCAAACCCTGACCAATCGGAAGGAGCCACGCTTCGGGCATCGGTACCCGACCTGGACAGCTCCGATTGGTGGACTTCGCGCCCCCTCACGAATC
501 CTCATTGGGTGCGGTGGGTGCGTGGTGGCGCGATTGGTGGGTTATGTTTCCCGTCCCCGCCCGGAGAAGTGGGGGTGAAAGCGGCCCGACCTGC
601 TTGGGGTGTAGTGGGCGACCGCGCGGCTGGAGGTGTGAGGATCCGAACCCAGGGGTGGGGGTGGAGGCGGCTCTCGCATCGAAGGGGACTTGAGACT

BspHI (715)

701 CACCGCGCCGACGTCATGAGCGGTTCTCATCATCATCATCATGGTATGGCTAGCATGACTGGTGGACGAAATGGGTGGGATCTGTACGACGATG
MetSerGlySerHisHisHisHisHisHisGlyMetAlaSerMetThrGlyGlyGlnGlnMetGlyArgAspLeuTyrAspAspA
801 ACGATAAGGTACCTAAGGATCAGCTTGGAGTTGATCCCGTCTTTTACAACGCTGCTGACTGGGAAAACCCCTGGCGTTACCCAACTTAATCGCCTTGCAGC
29 spAspLysValProLysAspGlnLeuGlyValAspProValValLeuGlnArgAspTrpGluAsnProGlyValThrGlnLeuAsnArgLeuAlaAl
901 ACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCGACCGATCGCCCTTCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCTTTCCTGG
62 aHisProProPheAlaSerTrpArgAsnSerGluGluAlaArgThrAspArgProSerGlnGlnLeuArgSerLeuAsnGlyGluTrpArgPheAlaTrp
1001 TTTCCGGCACCAGAAGCGGTGGCGGAAAGCTGGCTGGAGTGGCATCTTCTGAGGCCGATACTGCTGCTGCCCTCAAACCTGGCAGATGCACGGTTACG
96 PheProAlaProGluAlaValProGluSerTrpLeuGluCysAspLeuProGluAlaAspThrValValValProSerAsnTrpGlnMetHisGlyTyrA
1101 ATGCGCCCATCTACACCAACGTAACCTATCCCATACCGTCAATCCGCGCTTGTTCACCGGAGAATCCGACGGGTTGTTACTCGCTCACATTTAATGT
129 spAlaProIeTyrThrAsnValThrTrpProIeThrValAsnProPheValProThrGluAsnProThrGlyCysTyrSerLeuPheAsnVa
1201 TGATGAAAGCTGGCTACAGGAAGGCCAGACGCGAATATTTTTGATGGCGTTAACTCGGCGTTTCATCTGTGGTGAACGGCGCTGGGTTCGGTTACGGC
162 lAspGluSerTrpLeuGlnGluGlyGlnThrArgIleIePheAspGlyValAsnSerAlaPheHisLeuTrpCysAsnGlyArgTrpValGlyTyrGly
1301 CAGGACAGTCGTTTGGCGTCTGAATTTGACCTGAGCGCATTTTTACGGCCCGGAGAAAACCGCCTCGCGGTGATGGTGTGCGGTTGGAGTGACGGCAGTT
196 GlnAspSerArgLeuProSerGluPheAspLeuSerAlaPheLeuArgAlaGlyLeuAsnArgLeuAlaValMetValLeuArgTrpSerAspGlySerT
1401 ATCTGGAAGATCAGGATATGTGGCGGATGAGCGGCATTTCCGTGACGCTCTGTTGCTGCATAAACCGACTACAAAATCAGCGATTTCATGTTGCCAC
229 yrLeuGluAspGlnAspMetTrpArgMetSerGlyIlePheArgAspValSerLeuLeuHisLysProThrThrGlnIleSerAspPheHisValAlaTh
1501 TCGTTTTAATGATGATTTTCAGCCGCGTGTACTGGAGGCTGAAGTTCAGATGTGCGCGGAGTTGCGTGACTACCTACGGGTAACAGTTTCTTTATGGCAG
262 rArgPheAsnAspAspPheSerArgAlaValLeuGluAlaGluValGlnMetCysGlyGluLeuArgAspTyrLeuArgValThrValSerLeuTrpGln
1601 GGTGAAACGCGAGTCCGACGGCACCAGCGCTTTCGGCGGTGAAATATCGATGAGCGTGGTGGTTATGCCGATCCGCTCACACTACGCTGAACGTCG
296 GlyGluThrGlnValAlaSerGlyThrAlaProPheGlyGlyGluIleIeAspGluGlyGlyTyrAlaAspArgValThrLeuArgLeuAsnValG
1701 AAAACCCGAACTGTGGAGCGCGAAATCCCGAATCTCTATCGTGGCGTGGTGAACGACACCGCGACGGCAGCGTATTGAAGCAGAAGCCTGCCGA
329 luAsnProLysLeuTrpSerAlaGluIleProAsnLeuTyrArgAlaValValGluLeuHisThrAlaAspGlyThrLeuIleGluAlaGluAlaCysAs
1801 TGTCGGTTTCCGCGAGTGGCGATTGAAAATGGTCTGCTGCTGCTGAACGGCAAGCGGTTGCTGATTTCGAGGCGTTAACCGTACGAGCATCATCTCTG
362 pValGlyPheArgGluValArgIleGluAsnGlyLeuLeuLeuAsnGlyLysProLeuLeuIleArgGlyValAsnArgHisHisHisProLeu
1901 CATGGTCAGGTCATGGATGAGCAGCATGGTGCAGGATATCTGCTGATGAAGCAGAACTTAACCGCGTGGCTGTTTCGCTATTCCGAACCATC
396 HisGlyGlnValMetAspGluGlnThrMetValGlnAspIleLeuLeuMetLysGlnAsnAsnPheAsnAlaValArgCysSerHisTyrProAsnHisP
2001 CGCTGTGTACAGCTGTGCGACCGCTACGGCTGTATGTGGTGGATGAAGCAATATTGAAACCCAGGCATGGTGCCAATGAATCGTCTGACCGATGA
429 roLeuTrpTyrThrLeuCysAspArgTyrGlyLeuTyrValValAspGluAlaAsnIleGluThrHisGlyMetValProMetAsnArgLeuThrAspAs
2101 TCCGCGCTGGCTACCGCGATGAGCGAACCGCTAACCGAATGGTGCAGCGCGATCGTAATCACCGAGTGTGATCATCTGGTCCGTTGGGAATGAATCA
462 pProArgTrpLeuProAlaMetSerGluArgValThrArgMetValGlnArgAspArgAsnHisProSerValIleIeTrpSerLeuGlyAsnGluSer
2201 GGCCACGGCGTAATCACGACGCGCTGTATCGCTGGATCAAATCTGTCGATCCTTCCCGCCCGTGCAGTATGAAGCGCGGAGCCGACACCAGGCCA
496 GlyHisGlyAlaAsnHisAspAlaLeuTyrArgTrpIleLysSerValAspProSerArgProValGlnTyrGluGlyGlyAlaAspThrThrAlaT
2301 CCGATATATTTGCCGATGTACGCGCGCTGGATGAAGACAGCCCTTCCGGCTGTGCCAAATGGTCCATCAAAAAATGGCTTTCGCTACCTGGAGA
529 hrAspIleIeCysProMetTyrAlaArgValAspGluAspGlnProPheProAlaValProLysTrpSerIleLysLysTrpLeuSerLeuProGlyGly
2401 ACAGCGCCGCTGATCTTGGCAATACGCCACCGCATGGTGAACGCTCTGGCGGTTTCGCTAAATACTGGCAGGCGTTTCGTCAGTATCCCCGTTA
562 uThrArgProLeuIleLeuCysGluTyrAlaHisAlaMetGlyAsnSerLeuGlyGlyPheAlaLysTyrTrpGlnAlaPheArgGlnTyrProArgLeu
2501 CAGGGCGGCTTCGTCTGGGACTGGGTGGATCAGTCTGATTAATATGATGAAACGGCAACCCGTTGGTTCGGCTTACGGCGGTGATTTGGCGATAGCC
596 GlnGlyGlyPheValTrpAspTrpValAspGlnSerLeuIleLysTyrAspGluAsnGlyAsnProTrpSerAlaTyrGlyGlyAspPheGlyAspThrP
2601 CGAACGATCGCCAGTTCTGTATGAACGGTCTGGTCTTTCGCGACCGCAGCCGATCCAGCGCTGACGGAAGCAAAACACCAGCAGCAGTTTTCCAGTT
629 roAsnAspArgGlnPheCysMetAsnGlyLeuValPheAlaAspArgThrProHisProAlaLeuThrGluAlaLysHisGlnGlnPhePheGlnPh
2701 CCGTTTTATCCGGGCAAACCATCGAAGTGACCAGCAATACCTGTTCCGTCATAGCGATAACGAGCTCCTGCAGTGGTGGCGCTGGATGGTAAAGCCG
662 eArgLeuSerGlyGlnThrIleGluValThrSerGluTyrLeuPheArgHisSerAspAsnGluLeuLeuHisTrpMetValAlaLeuAspGlyLysPro
2801 CTGGCAAGCGGTGAAGTGCCTCTGGATGTCGCTCCACAAGGTAACAGTTGATTGAACTGCCTGAACTACCGCAGCCGAGAGCGCCGGCAACTCTGGC
696 LeuAlaSerGlyGluValProLeuAspValAlaProGlnGlyLysGlnLeuIleGluLeuProGluLeuGlnProGluSerAlaGlyGlnTrpL
2901 TCACAGTACCGCTAGTGCACCGAAGCGACCGCATGGTFCAGAAAGCGGACATCAGCGCCTGGCAGCAGTGGCGCTGGCGGAAAACCTCAGTGTGAC
729 euThrValArgValValGlnProAsnAlaThrAlaTrpSerGluAlaGlyHisIleSerAlaTrpGlnGlnTrpArgLeuAlaGluAsnLeuSerValTh
3001 GCTCCCCGCGCGTCCACGCCATCCCGCATCTGACCACAGCGAAATGGATTTTTGCATCGAGCTGGGTAATAAGCGTTGGCAATTAACCGCCAGTCA
762 rLeuProAlaAlaSerHisAlaIleProHisLeuThrThrSerGluMetAspPheCysIleGluLeuGlyAsnLysArgTrpGlnPheAsnArgGlnSer
3101 GGCTTTCTTTCACAGATGTGGATTGGCGATAAAAAACAATGCTGACCGCGCTGGCGATCAGTTTACCCGTCACCGCTGGATAACGACATTGGCGTAA
796 pProPheLeuSerGlnMetTrpIleGlyAspLysLysGlnLeuLeuThrProLeuArgAspGlnPheThrArgAlaProLeuAspAsnAspIleGlyValS
3201 GTGAAGCGACCCGATTAACCTAACCGCTGGGTGGAACCGTGAAGCGCGCGGCCATTACCAGGCCAAGCAGCGTTGTTGACGTGCACGGCAGATAC
829 erGluAlaThrArgIleAspProAsnAlaTrpValGluArgTrpLysAlaAlaGlyHisTyrGlnAlaGluAlaAlaLeuLeuGlnCysThrAlaAspTh
3301 ACTTGCTGATGGGTGCTGATTACGACCGCTACCGCTGGCAGCATAGGGGAAAACCTTATTATCAGCCGAAAACCTACCGGATTGATGGTAGTGGT
862 rLeuAlaSerAlaValAlaIleThrThrAlaHisAlaTrpGlnHisGlnGlyLysThrLeuPheIleSerArgLysThrTyrArgIleAspGlySerGly
3401 CAAATGGCGATTACCGTTGATGTTGAAGTGGCGAGCATACACCGCATCCGCGCGGATTGGCCGTAACCTGACAGTGGCGAGTGGCGAGCGGGTAA
896 GlnMetAlaIleThrValAspValGluValAlaSerAspThrProHisProAlaArgIleGlyLeuAsnCysGlnLeuAlaGlnValAlaGluArgValA
3501 ACTGGCTCGGATTAGGCGCGAAGAAAATATCCCGACCGCTTACTGCGCGCTGTTTTGACCGCTGGGATCTGCCATTGTACAGACATGTATACCCCGTA
929 snTrpLeuGlyLeuGlyProGlnGluAsnTyrProAspArgLeuThrAlaAlaCysPheAspArgTrpAspLeuProLeuSerAspMetTyrThrProTy

3601 CGTCTTCCGAGCGAAAAACGGTCTGCGCTGCGGGACGCGGAATTGAATTATGGCCACACCAGTGGCGGGCGACTTCCAGTTCAACATCAGCCGCTAC
962▶ rValPheProSerGluAsnGlyLeuArgCysGlyThrArgGluLeuAsnTyrGlyProHisGlnTrpArgGlyAspPheGlnPheAsnI leSerArgTyr
3701 AGTCAACAGCAACTGATGGAAACCAGCCATCGCCATCTGCTGCACGGGAAGAAGGCACATGGTGAATATCGACGGTTTCCATATGGGATTGGTGGCG
996▶ SerGlnGlnGlnLeuMetGluThrSerHisArgHisLeuLeuHisAlaGluGluGlyThrTrpLeuAsnI leAspGlyPheHisMetGlyI leGlyGlyA

EcoRI (3900)

3801 ACGACTCCTGGAGCCCCTCAGTATCGGCGGAATTACAGCTGAGCGCCGGTGCCTACCATTACCAGTTGGTCTGGTGTCAAAAATAATAATCTAGTCGAGA
1029▶ spAspSerTrpSerProSerValSerAlaGluLeuGlnLeuSerAlaGlyArgTyrHisTyrGlnLeuValTrpCysGlnLys•••
3901 ATTGCTAGCTCGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTA

4001 TTGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAAGTTAACAACAACAATTGCATTCAATTTTATGTTT

PacI (4181)

4101 CAGGTTCCAGGGGAGGTGTGGGAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTAGATCCATTTAAATGTTAATTAAGTAGCCATGACCAAAAT

4201 CCCTTAACGTGAGTTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTCTGCGCGTAATCTGCTGCTTG

4301 CAAACAAAAAACACCCTACCAGCGGTGTTTGTGTTGCCGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAACCTGGCTTCAGCAGAGCCGAGATAC

4401 CAAATACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGC

4501 TGCTGCCAGTGGCGATAAGTCGTGCTTACCAGGTTGGACTCAAGACGATAGTTACCGGATAAGCGGCAGCGGTGCGGCTGAACGGGGGTTTCGTGCACA

4601 CAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGCGGACAGGT

4701 ATCCGGTAAGCGGCAGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGAAACGCCTGGTATCTTTATAGTCTGTGCGGTTTCGCCACCTCTG

4801 ACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGCGGAGCCTATGGAAAAACGCCAGCAACCGGCCTTTTTACGGTTCCTGCCCTTTTGTGCGCT

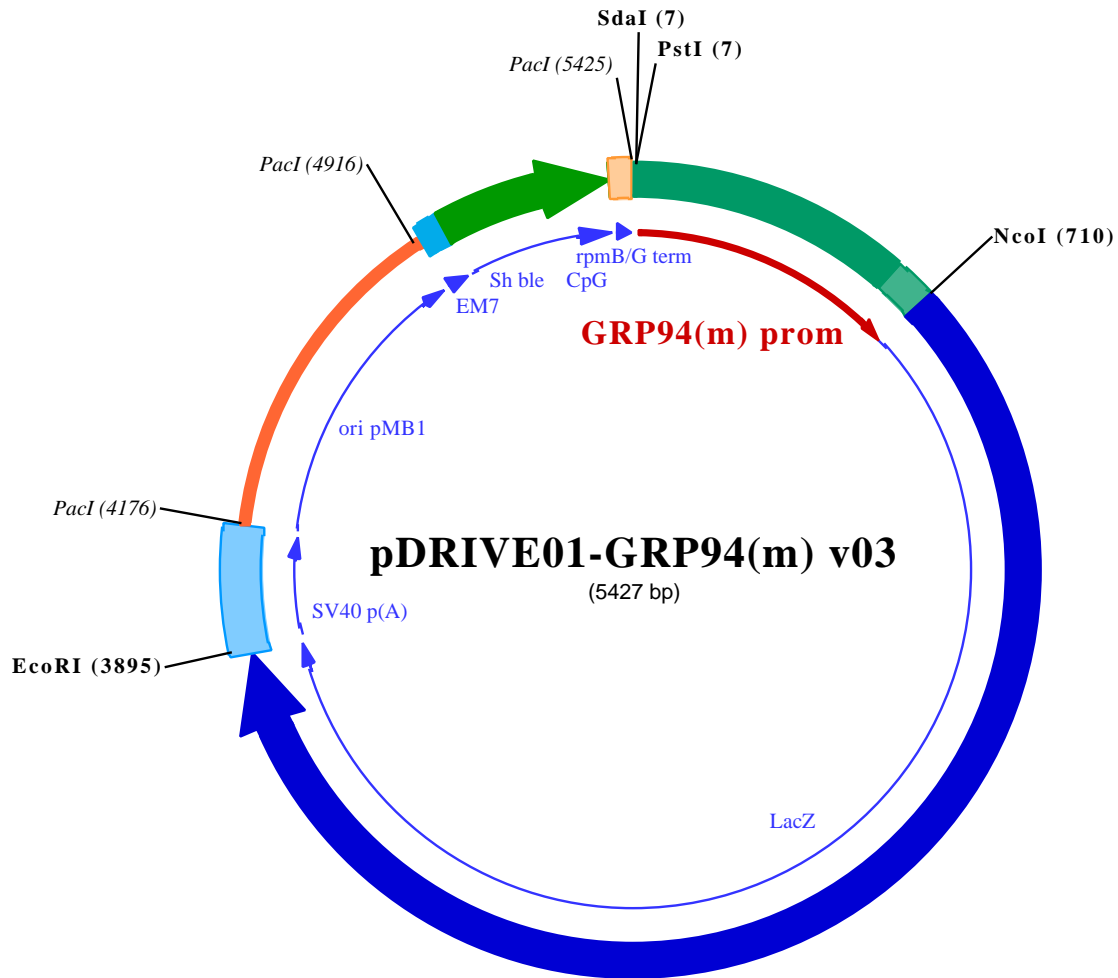
PacI (4921)

4901 TTTGCTCACATGTTCTTAATTAATTTTCAAAAGTAGTTGACAATTAATCATCGGCATAGTATATCGGCATAGTATAATACGACTCACTATAGGAGGGC

5001 CATCATGGCCAAGTTGACCAGTGTGTCACAGCCAGGATGTGGCTGGAGCTGTTGAGTTCTGGACTGACAGGTTGGGGTTCTCCAGAGAT
1▶ MetAlaLysLeuThrSerAlaValProValLeuThrAlaArgAspValAlaGlyAlaValGluPheTrpThrAspArgLeuGlyPheSerArgAsp
5101 TTTGTGGAGGATGACTTTGCAGGTGTGGTCAGAGATGATGTCACCCTGTTTCATCTCAGCAGTCCAGGACCAGGTGGTGCCTGACAACACCCTGGCTTGGG
33▶ PheValGluAspAspPheAlaGlyValValArgAspAspValThrLeuPheI leSerAlaValGlnAspGlnValValProAspAsnThrLeuAlaTrpV
5201 TGTGGGTGAGAGGACTGGATGAGCTGTATGCTGAGTGGAGTGAGGTGGTCTCCACCAACTTCAGGGATGCCAGTGGCCCTGCCATGACAGAGATTGGAGA
66▶ alTrpValArgGlyLeuAspGluLeuTyrAlaGluTrpSerGluValValSerThrAsnPheArgAspAlaSerGlyProAlaMetThrGluI leGlyGl
5301 GCAGCCCTGGGGGAGAGATTTGCCCTGAGAGACCCAGCAGGCAACTGTGTGCACTTGTGGCAGAGGAGCAGGACTGAGGATAAGAAATTGAGTTTCAGA
99▶ uGlnProTrpGlyArgGluPheAlaLeuArgAspProAlaGlyAsnCysValHisPheValAlaGluGluGlnAsp•••

PacI (5437)

5401 AAAGGGGCCTGAGTGGCCCTTTTTTCAACTTAATTAA



150
|-----|

PstI (7)
SdaI (7)

1 CCTGCAGGGCCACTAGTGCCTTGCATGCCGAAACTGTAGTTTCTCACCACCATCCAACGCATTCCGGATATTCAACCCCTCACAAATTTCTCTTTG
101 CGAAAAGAAACGCCAAAAGAAAGGTGACGGCGAACGTAGCGCTGAAAGGACTCGTAACTGACCCGCTCGTAGACGAGAAAAGGTAAGGACGCATT
201 GTCTTGGCTACCGTTTCCCTAGTACGGACTAAACGTTTCGTAGAAGCCGGAAGTGGTTCCCGGGACCTCTAGGAATGGACAGACGTGCTATGCGCCT
301 ACGTTTCATTGGACGGTTTTCTCAGGGACCAAGGCTTCCAGGCCAAAGGTTGGCCGGTGTGTGAGGGCCCGGGACCCATCTGATTGGAGGAAAGCCG
401 CTGGACAAGCCCAATCGCAAGGAGCCACGCTTCGGGCATCGGGCACCACCTGGACAGTTCGATTGGCGGGCTGCGGTCCCCCCATGCTCTCCATT
501 GGGTGCAGAGAGTGCCTGGTGAGGCACGATTGGTGTAGTTCGTGTTTCCCGTCCCGCCCGCAAGCAGTGGGGTGAAGAGCGGCCGACCTGCGCGGGC
601 TTAGTGGGCGGACCGCTGCTGGAGGTGTGAGGAGCTTAGACTCGGGATTGGGGGGTGGAGGCGGCTCCTGAGACCGAAAAGACTTGGACTCGCCG

NcoI (710)

701 GCCACGCCACCATGGGGGTTCTCATCATCATCATCATGTTATGGCTAGCATGACTGGTGACAGCAAATGGGTCGGGATCTGTACGACGATGACGAT
801 AAGTACCTAAGGATCAGCTTGGAGTTGATCCCGCTGTTTACAACGTCGTGACTGGGAAAACCTGGCGTTACCCAATTAATCGCCTGCAGCACATC
31 LysValProLysAspGlnLeuGlyValAspProValValLeuGlnArgArgAspTrpGluAsnProGlnValThrGluLeuAsnArgLeuAlaAlaHisP
901 CCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGGCGAGCCTGAATGGCGAATGGCGCTTGGCTGGTTCC
64 roProPheAlaSerTrpArgAsnSerGluGluAlaArgThrAspArgProSerGlnGlnLeuArgSerLeuAsnGlyGluTrpArgPheAlaTrpPhePr
1001 GGCACCAGAAGCGGTGCCGAAAGCTGGCTGGAGTGGCATCTTCTGAGGCCGATACTGTCTGCTGCCCTCAAACCTGGCAGATGCACGGTTACGATGGC
97 oAlaProGluAlaValProGluSerTrpLeuGluCysAspLeuProGluAlaAspLeuValValValMetValLeuArgTrpSerAspGlySerTrpLeu
1101 CCCATCTACCCAACGTAACCTATCCCATACGGTCAATCCGCGTTTCCACCGGAGAATCCGACGGGTTGTTACTCGCTCACATTTAATGTTGATG
131 Prol IeTyrThrAsnValThrTyrProl IeThrValAsnProProPheValProThrGluAsnProThrGlyCysTyrSerLeuThrPheAsnValAspG
1201 AAAGCTGGCTACAGGAAGGCCAGACGCGAATTTTTTGGATGGCGTTAACTGGCGTTTCATCTGTGGTGCAACGGGCGCTGGGTCGGTTACGGCCAGGA
164 luSerTrpLeuGlnGluGlyGlnThrArgI IeI IePheAspGlyValAsnSerAlaPheHisLeuTrpCysAsnGlyArgTrpValGlyTyrGlyGlnAs
1301 CAGTCGTTTGGCGTCTGAATTTGACCTGAGCGCATTTTTACGGCCGGAGAAAACCGCCTCGCGGTGATGGTGTGCGTTGGAGTGACGGCAGTTATCTG
197 pSerArgLeuProSerGluPheAspLeuSerAlaPheLeuArgAlaGlyGluAsnArgLeuAlaValMetValLeuArgTrpSerAspGlySerTrpLeu
1401 GAAGATCAGGATATGTGGCGGATGAGCGGCATTTTCCGTGACGTCTCGTGTGTCATAAACCGACTACACAAATCAGCGATTTCCATGTTGCCACTCGCT
231 GluAspGlnAspMetTrpArgMetSerGlyI IePheArgAspValSerLeuLeuHisLysProThrThrGlnI IeSerAspPheHisValAlaThrArgP
1501 TTAATGATGATTTACGCCGCGTGTACTGGAGGCTGAAGTTCAGATGTGGCGGAGTTGGCTGACTACCTACGGGTAACAGTTTCTTTATGGCAGGGTGA
264 heAsnAspPheSerArgAlaValLeuGluAlaGlnMetCysGluArgMetCysGluArgValTrpLeuValSerLeuTrpGlnGlyGln
1601 AACGCAGGTCCGACGGCCACCGCCCTTCCGGCGTGAATTTACGATGAGCGTGGTGGTTATGCCGATCCGCTCACACTAGCTCTGAACGTCGAAAAC
297 uThrGlnValAlaSerGlyThrAlaProPheGlyGlyGluI IeI IeAspGluArgGlyGlyTyrAlaAspArgValThrLeuArgLeuAsnValGluAsn
1701 CCGAAACTGTGGAGCGCGAAATCCCGAATCTCTATCGTGGCGTGGTTGAATGTCACACCGCCGACGGCAGCCTGATTGAAGCAGAAGCCTCGCATGTCG
331 ProLysLeuTrpSerAlaGluI IeProAsnLeuTyrArgAlaValValGluLeuHisThrAlaAspGlyThrLeuI IeGluAlaGluAlaCysAspValG
1801 GTTCCGCGAGGTGGGATGAAAATGGTCTGCTGCTGTAACGGCAAGCCGTTGCTGATTCGAGGCGTTAACCGTCACGAGCATCTCTGCTGCATG
364 lyPheArgGluValArgI IeGluAsnGlyLeuLeuLeuAsnGlyLysProLeuLeuI IeArgGlyValAsnArgHisGluHisLeuTrpGlnHisGln
1901 TCAGGTCATGGATGAGCAGACGATGGTGCAGGATATCTGCTGATGAAGCAGAACAACTTTAACCGCGTGGCTGTTCCGATTATCCGAACCATCCGCTG
397 yGlnValMetAspGluGlnThrMetValGlnAspI IeLeuLeuMetLysGlnAsnAsnPheAsnAlaValArgCysSerHisTyrProAsnHisProLeu
2001 TGGTACACGCTGTGGCAGCCGCTACGGCCTGTATGTGGTGGATGAAGCCAATATTGAAACCCACGGCATGGTGGCAATGAATCGTCTGACCGATGATCCGC
431 TrpTyrThrLeuCysAspArgTyrGlyLeuTyrValValAspGluAlaAsnI IeGluThrHisGlyMetValProMetAsnArgLeuThrAspProA
2101 GCTGGCTACCCGCGATGAGCGAACCGCTAACCGAATGGTGCACCGCATCTGAATCACCAGGTGTGATCATCTGGTCCGTTGGGGAATGAATCAGGCCA
464 rgTrpLeuProAlaMetSerGluArgValThrArgMetValGlnArgAspArgAsnHisProSerVal I IeI IeTrpSerLeuGlyAsnGluSerGlyHi
2201 CCGCGCTAATCAGCAGCGCTGTATCGCTGGATCAAATCTGTGATCCTTCCCGCCGGTGCAGTATGAAGCGGGCGAGCCGACACCGCCACCGAT
497 sGlyAlaAsnHisAspAlaLeuTyrArgTrpI IeLysSerValAspProSerArgProValGlnTyrGluGlyGlyAlaAspThrThrAlaThrAsp
2301 ATTATTTGCCGATACCGCGCGTGGATGAAGACCAGCCCTTCCCGCTGTGCGGAAATGCCATCAAAAAATGGTTTTCGCTACCTCGGAGAGACGC
531 I IeI IeCysProMetTyrAlaArgValAspGluAspGlnProPheProAlaValProLysTrpSerI IeLysLysTrpLeuSerProGlyGlnThrA
2401 GCCCGCTGATCCTTTGCGAATACGCCACGGATGGTAACAGTCTTGGCGGTTTCGCTAAATACTGGCAGGCGTTTTCGTCAATCCCCGTTTACAGGG
564 rgProLeuI IeLeuCysGluTyrAlaHisAlaMetGlyAsnSerLeuGlyGlyPheAlaLysTyrTrpGlnAlaPheArgGlnTyrProArgLeuGlnGln
2501 CGGCTTCGCTGGGACTGGGTGGATCAGTCTGATTAATATGATGAAAACGGCAACCCGTTGGTGGCTTACGGCGGTGATTTGGCGATACGCCGAAC
597 yGlyPheAlaValTrpAlaValAspGlnSerLeuI IeLysTyrAspGluAsnGlyLysProTrpSerAlaTyrGlyGlyMetPheGlyAspTrpLeuAsn
2601 GATCGCCAGTTCTGTATGACCGCTTGGTCTTTGCGCAGCCGACCGCATCCAGCGCTGACGGAAGCAAAACACCAGCAGCAGTTTTTCCAGTTCCGTT
631 AspArgGlnPheCysMetAsnGlyLeuValPheAlaAspArgThrProHisProAlaLeuThrGluAlaLysHisGlnGlnGlnPhePheGlnPheArgL
2701 TATCCGGGCAAAACCATCGAAGTGACCAGCGAATACCTGTTCCGTCATAGCGATAACGAGCTCCTGCAGTGGATGGTGGCGCTGGATGTAAGCCGCTGGC
664 euSerGlyGlnThrI IeGluValThrSerGluTyrLeuPheArgHisSerAspAsnGluLeuHisTrpMetValAlaLeuAspGlyLysProLeuAl
2801 AAGCGGTGAAGTGCCTGATGCTCCACAAGTAAACAGTTGATTGAAGTGCCTGAACCTACCGCAGCCGAGAGCGCCGGCAACTCTGGCTCACA
697 aSerGlyGluValProLeuAspValAlaProGlnGlyLysGlnLeuI IeGluLeuProGluLeuSerProGlnProGluSerAlaGlyGlnLeuTrpLeuThr
2901 GTACCGTAGTGAACCGAACCGACCGCATGGTCAAGCCGGGCACATCAGCGCTGGCAGCAGTGGCTCTGGCGGAAAACCTCAGTGTGACGCTCC
731 ValArgValValGlnProAsnAlaThrAlaTrpSerGluAlaGlyHisI IeSerAlaTrpGlnGlnTrpArgLeuAlaGluAsnLeuSerValThrLeuP
3001 CCGCCGCTCCACGCCATCCCGCATCTGACCACCAGCGAAATGGATTTTTGATCAGGCTGGGTAATAAGCGTTGGCAATTAACCGCCAGTCAAGCTT
764 roAlaAlaSerHisAlaI IeProHisLeuThrThrSerGluMetAspPheCysI IeGluThrHisGlyAsnLysArgTrpGlnPheAsnArgTrpLeuGlyPh
3101 TCTTTACAGATGGATTGGCGATAAAAAACAATCGTGCAGCCGTCGCGGATCAGTTCCACCGTGCACCCTGGATAACGACATTTGGCGTAAGTGAA
797 eLeuSerGlnMetTrpI IeGlyAspLysLysGlnLeuLeuThrProLeuArgAspGlnPheThrArgAlaProLeuAspAsnAspI IeGlyValSerGlu
3201 GCGACCCGATTGACCCTAACCGCTGGTTCGAACCGTGAAGCGCGCGGGCCATTACAGGCGAAGCAGCGTTGTTGCAGTGCACGGCAGATACACTTG
831 AlaThrArgI IeAspProAsnAlaTrpValGluArgTrpLysAlaAlaGlyHisTyrGlnAlaGluAlaAlaLeuLeuGlnCysThrAlaAspThrLeuA
3301 CTGATCCGGTGTGATACGACCGCTACCGGTGGCAGCATCAGGGGAAAACCTTATTTATCAGCCGAAAACCTACCGGATTGATGGTAGTGGTCAAT
864 laAspAlaValLeuI IeThrThrAlaHisAlaTrpGlnHisGlnGlyLysThrLeuPheI IeSerArgLysThrTyrArgI IeAspGlySerGlyGlnMe
3401 GCGGATTACCGTTGATGTTGAAGTGGCGAGGATACACCGCATCCGGCGGGATTGGCTGAACTGCCAGCTGGCCAGGTAGCAGAGCGGGTAACTGG
897 tAlaI IeThrValAspValGluValAlaSerAspThrProHisProAlaArgI IeGlyLeuAsnCysGlnLeuAlaGlnValAlaGluArgValAsnTrp
3501 CTCGGATTAGGCGCGAAGAAAATATCCCGACCGCCTTACTGCGCCTGTTTTGACCGCTGGGATCTGCCATTGTGACAGATGTATACCCCGTACGCT
931 LeuGlyLeuGlyProGlnGluAsnTyrProAspArgLeuThrAlaAlaCysPheAspArgTrpAspLeuProLeuSerAspMetTyrThrProTyrValP

3601 TCCCGAGCGAAAACGGTCTGCGCTGCGGGACGCGGAATTGAATTATGGCCACACCAGTGGCGCGGACTTCCAGTTCAACATCAGCCGCTACAGTCA
 964▶ heProSerGluAsnGlyLeuArgCysGlyThrArgGluLeuAsnTyrGlyProHisGlnTrpArgGlyAspPheGlnPheAsnI leSerArgTyrSerGI
 3701 ACAGCAACTGATGGAACACGCATCGCCATCTGCTGCACGGGAAGAAGGCACATGGTGAATATCGACGGTTTCCATATGGGATTGGTGGCGACGAC
 997▶ nGlnGlnLeuMetGluThrSerHisArgHisLeuLeuHisAlaGluGluGlyThrTrpLeuAsnI leAspGlyPheHisMetGlyI leGlyGlyAspAsp
EcoRI (3895)

3801 TCCTGGAGCCCCAGTATCGGCGGAATTACAGCTGAGCGCCGGTCTGCTACCATTACCAGTTGGTCTGGTGTCAAAAATAATAATCTAGTCGAGAATTCCG
 1031▶ SerTrpSerProSerValSerAlaGluLeuGlnLeuSerAlaGlyArgTyrHisTyrGlnLeuValTrpCysGlnLys•••

3901 CTAGCTCGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCT
 4001 TTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAAACAAGTTAACAACAACAATTGCATTCAATTTTATGTTTCAGGT

PacI (4176)

4101 TCAGGGGAGGTGTGGGAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTAGATCCATTTAAATGTTAATTAAGTAGCCATGACCAAAATCCCTT
 4201 AACGTGAGTTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTCTGCGCGTAATCTGCTGCTTGCAAAAC
 4301 AAAAAAACACCCGTACCAGCGGTGTTTGTGTTGCCGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAACCTGGCTTCAGCAGAGCCGAGATACCAAAAT
 4401 ACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTG
 4501 CCAGTGGCGATAAGTCTGTCTTACCAGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTGGGCTGAACGGGGGTTTCGTGCACACAGCC
 4601 CAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCG
 4701 GTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGAAACGCCTGGTATCTTTATAGTCTGTGCGGTTTCGCCACCTCTGACTTG
 4801 AGCGTCGATTTTTGTGATGCTCGTCAGGGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGTGGCCTTTTTCG

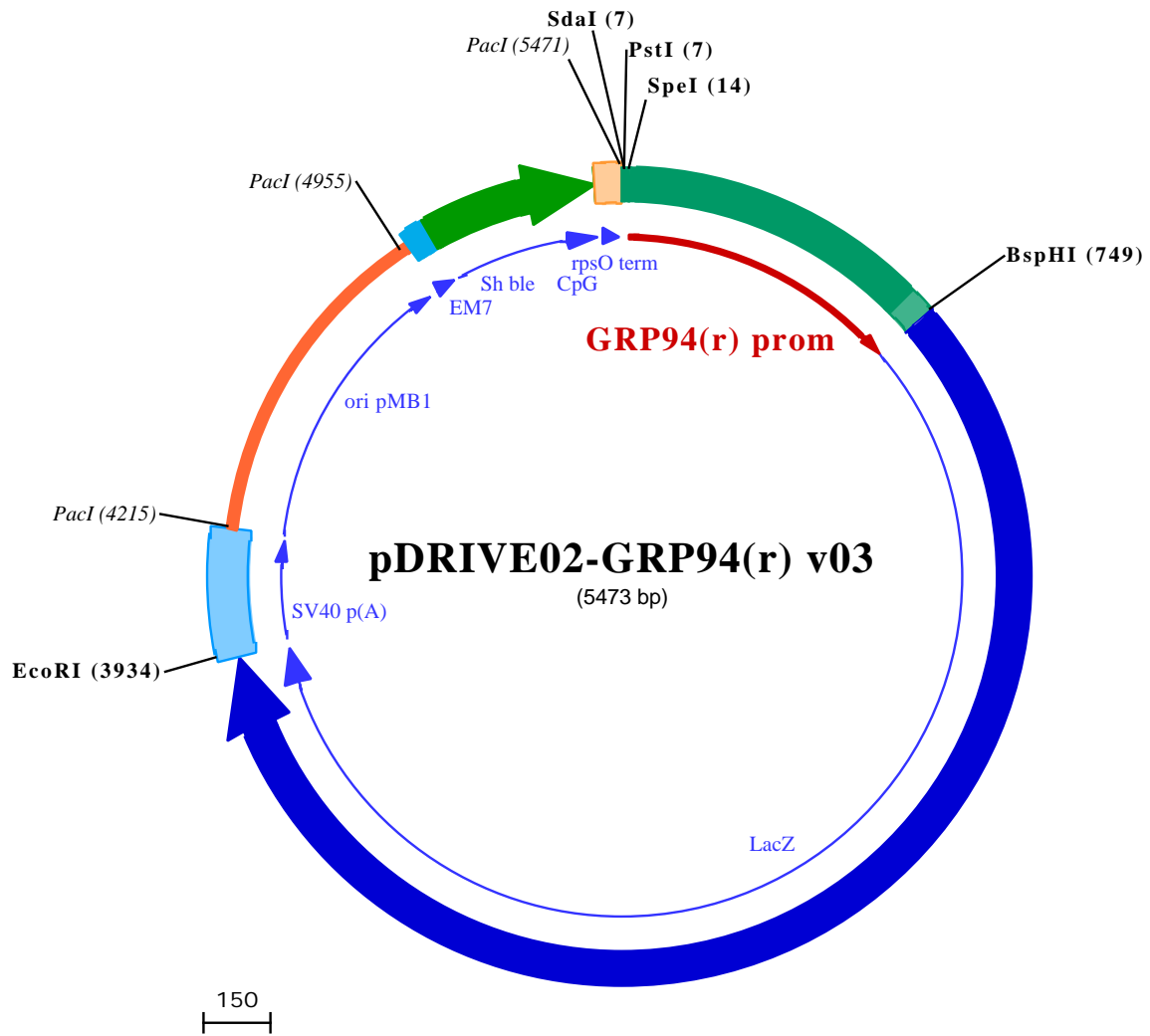
PacI (4916)

4901 TCACATGTTCTTAATTAATTTTCAAAAGTAGTTGACAATTAATCATCGGCATAGTATATCGGCATAGTATAATACGACTCACTATAGGAGGGCCATCA
1▶M

5001 TGGCCAAGTTGACCAGTGTGTCCAGTGCTCACAGCCAGGGATGTGGCTGGAGCTGTTGAGTCTGGACTGACAGGTTGGGGTTCTCCAGAGATTTTGT
 1▶ etAlaLysLeuThrSerAlaValProValLeuThrAlaArgAspValAlaGlyAlaValGluPheTrpThrAspArgLeuGlyPheSerArgAspPheVa
 5101 GGAGGATGACTTTGCAGGTGGTTCAGAGATGATGTCAACCCTGTTTCATCTCAGCAGTCCAGGACCAGGTGGTGCCTGACAACACCCTGGCTTGGGTGTGG
 34▶ lGluAspAspPheAlaGlyValValArgAspAspValThrLeuPheI leSerAlaValGlnAspGlnValValProAspAsnThrLeuAlaTrpValTrp
 5201 GTGAGAGGACTGGATGAGCTGTATGCTGAGTGGAGTGAGGTGGTCTCCACCAACTTCAGGGATGCCAGTGGCCCTGCCATGACAGAGATTGGAGAGCAGC
 68▶ ValArgGlyLeuAspGluLeuTyrAlaGluTrpSerGluValValSerThrAsnPheArgAspAlaSerGlyProAlaMetThrGluI leGlyGluGlnP
 5301 CCTGGGGGAGAGAGTTTTGCCCTGAGAGACCCAGCAGGCAACTGTGTGCACTTGTGGCAGAGGAGCAGGACTGAGGATAAGGATTTGTAACAAAAACCCC
 101▶ roTrpGlyArgGluPheAlaLeuArgAspProAlaGlyAsnCysValHisPheValAlaGluGluGlnAsp•••

PacI (5425)

5401 GCCCCGGCGGGTTTTTTGTAAATTAA



PstI (7)
SdaI (7) SpeI (14)

1 CCTGCAGGGCCACTAGTCGCCAGAGACTACAATTCCCAGCATTCTTGAGACTAGCGCGTTGCATGCCGGAAACTGTAGTTTCTCACCACCATCCAAACG
101 CACTCCGGATATTAACCCCTCACAAATTTCTCTTTTGGCAAAGAAACGCCAAAAGAAAGGTGACGGCGAACGTAGCGCTGAAAGGGCTCGTAACGTG
201 ACCCACGTCGTAGACGGGAAAAGGGTATAAACCAATTGTCTTGGCTACGGTTTCCCCTAGTCACGGAAACAAACGTTCTCTAAGAGCCGGAAGTGGTTCC
301 CCGGGACCTCTAGGAAAGGACAGACGTGCTATGCGCCTACATTTCATTGGACGGTTTTCTCTAGAGACCAAGGCTTCCAGGCCAAGGGGTGGCCCGGTG
401 GTGAGGGGCCCGCGAGCCATTGATTGGAGAAAAGCTGCTGGACAAACCAATCGAAAGGAGCCACGCTTCGGGCATCGGGCACCGCACCTGGACAGTT
501 CCGATTGGCGAGTTGCGGTCCCCCCATGCGTCCCATTTGGGTGACAGAGTGGTGGTGAGGCACGATTGGTGGGTTGCTGTTTCCCGTCCCCGCCCCG
601 CAAGCTGTGGGGTAAAAAGCGGCCGACCTGCGCGCGTTTGTAGTGGCGGACCCGCTGCTGGAGGTGTGAGGACCTGAGACTCCGGTTGGGGGGGTGG

BspHI (749)

701 AGGGCGCTCTGCGACCGAAAAGGACTTGGCACTCTCCGGCCACGCATCATGAGCGGTTCTCATCATCATCATCATGGTATGGCTAGCATGACTGGT
801 GGACAGCAAATGGGTGGGATCTGTACGACGATGACGATAAGGTACCTAAGGATCAGTTGGAGTTGATCCCGTCTTTACACCGTCTGACTGGGAAA
18 GlyGlnGlnMetGlyArgAspLeuTyrAspAspAspAspLysValProLysAspGlnLeuGlyValAspProValValLeuGlnArgArgAspTrpGluA
901 ACCCTGGCGTTACCAACTTAATCGCCTTGCAGCACATCCCCTTTCGCGAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCAACAGTT
51 snProGlyValThrGlnLeuAsnArgLeuAlaAlaHisProProPheAlaSerTrpArgAsnSerGluGluAlaArgThrAspArgProSerGlnGlnLe
1001 GCGCAGCCTGAATGGCGAATGGCGCTTTCGCTGGTTTCCGGCACCAGAAGCGGTGCCGAAAGCTGGCTGGAGTGGGATCTTCTGAGGCGGATACTGTG
84 uArgSerLeuAsnGlyGluTrpArgPheAlaTrpPheProAlaProGluAlaValProSerTrpLeuGluCysAspLeuGluAlaAspLeuTrpGluA
1101 GTCGTCCTCAAACCTGGCAGATGCACGGTTACGATGCGCCATCTACACCAACGTAACCTATCCCATTACGGTCAATCCGCGGTTTTGTTCCACGGAGA
118 ValValProSerAsnTrpGlnMetHisGlyTyrAspAlaProIeTyrThrAsnValThrTyrProIeThrValAsnProProPheValProThrGluA
1201 ATCCGACGGGTTGTACTCGCTCACATTAATGTTGATGAAAGCTGGCTACAGGAAGGCCAGACGCGAATTATTTTTGATGGCGTTAACTCGGCGTTTCA
151 snProThrGlyCysTyrSerLeuThrPheAsnValAspGluSerTrpLeuGlnGluGlyGlnThrArgIleIlePheAspGlyValAsnSerAlaPheHi
1301 TCTGTGGTGAACGGCGCTGGGTGCGTTACGGCCAGGACAGTCTGTTGCGGCTGTAATTTGACCTGAGCGCATTTTTACGGCGCGGAGAAAACCGCCTC
184 sLeuTrpCysAsnGlyArgTrpValGlyTyrGlyGlnAspSerArgLeuProSerGluPheAspLeuSerAlaPheLeuArgAlaGlyGluAsnArgLeu
1401 GCGGTGATGGTGTGCGTTGGAGTGACGGCAGTTATCTGGAAGATCAGGATATGTGGCGGATGAGCGGCATTTTCCGTGACGCTCTCGTTGCTGCATAAAC
218 AlaValMetValLeuArgTrpSerAspGlySerTyrLeuGluAspGlnAspMetTrpArgMetSerGlyIlePheArgAspValSerLeuLeuHisLysP
1501 CGACTACAAAATCAGCGATTTCCATGTTGCCACTCGCTTAAATGATGATTTACGCCGCGCTGACTGGAGGCTGAAGTTAGATGTGCGGCGAGTGGCG
251 roThrThrGlnIleSerAspPheHisValAlaThrArgPheAsnAspPheSerAlaValLeuGluAlaGluAlaValGlnMetCysGlyGluLeuAr
1601 TGACTACCTACGGTAACAGTTTCTTTATGGCAGGGTGAACCCGAGCTGCCAGCGGACCGCGCCTTTCGGCGGTGAAATTCGATGAGCGTGGTGGT
284 gAspTyrLeuArgValThrValSerLeuTrpGlnGlyGluThrGlnValAlaSerGlyThrAlaProPheGlyGlyGluIleIleAspGluArgGlyGly
1701 TATGCCGATCGGCTCACACTACGCTCTGAACGTCGAAAACCCGAAACTGTGGAGCGCGGAAATCCCGAATCTCTATCGTGGCGTGGTTGAAGTGCACACCG
318 TyrAlaAspArgValThrLeuArgLeuAsnValGluAsnProLysLeuTrpSerAlaGluIleProAsnLeuTyrArgAlaValValGluLeuHisThrA
1801 CCGACCGCAGCTGATGAAGCAGAAGCCTGCGATTCGCGTTTCGCGAGGTGGCGGATGAAAATGGTCTGCTGCTGAACCGCAAGCCGTTGCTGAT
351 laAspGlyThrLeuIleGluAlaGluAlaCysAspValGlyPheArgGluValArgIleGluAsnGlyLeuLeuLeuLeuLysProLeuMetI
1901 TCGAGCGGTTAACCGTCACGAGCATCATCCTCTGCATGGTCAAGTCTATGGATGAGCAGACGATGGTGCAGGATATCTGCTGATGAGCAGAAACACTTT
384 eArgGlyValAsnArgHisGluHisHisProLeuHisGlyGlnValMetAspGluGlnThrMetValGlnAspIleLeuLeuMetLysGlnAsnAsnPhe
2001 AACGCCGTGGCTGTTCCGATTAATCCGAACCATCCGCTGTGGTACACGCTGTGGACCGCTACGGCCTGTATGTGGTGGATGAAGCAATATTGAAACCC
418 AsnAlaValArgCysSerHisTyrProAsnHisProLeuTrpTyrThrLeuCysAspArgTyrGlyLeuTyrValValAspGluAlaAsnIleGluThrH
2101 ACGCATGGTGCCAAATCGTCTGACCGATGATCCGCGTGGCTACCGCGGATGAGCGAACCGTAACCGGAATGGTGCAGCGCATCGTAATCACCC
451 isGlyMetValProMetAsnArgLeuThrAspAspProArgTrpLeuProAlaMetSerGluArgValThrArgMetValGlnArgAspArgAsnHisPr
2201 GAGTGTGATCATCTGGTCTGGGAAATGAATCAGGCCACCGCGCTAATCACGACCGCTGTATCGTGGATCAAATCTGTGATCCTTCCGCCCCGGTG
484 oSerValIleIleTrpSerLeuGlyAsnGluSerGlyHisGlyAlaAsnHisAspAlaLeuTyrArgTrpIleLysSerValAspProSerArgProVal
2301 CAGTATGAAGCGGCGGAGCCGACACCCAGCCAGCATATTATTTCCCGGATGACCGCGCGTGGATGAAGACCAGCCCTTCCGGCTGTGCGGAAAT
518 GlnTyrGluGlyGlyAlaAspThrThrAlaThrAspIleIleCysProMetTyrAlaArgValAspGluAspGlnProPheProAlaValProLysT
2401 GGTCCATCAAAAATGGCTTTCGCTACCTGGAGACGCGCCGCTGATCCTTTGCGAATACGCCACCGGATGGGTAACAGTCTTGGCGGTTTCGCTAA
551 rpSerIleLysLysTrpLeuSerLeuProGlyGluThrArgProLeuIleLeuCysGluTyrAlaHisAlaMetGlyAsnSerLeuGlyGlyPheAlaLy
2501 ATACTGGCAGGCGTTTCGCTAGTATCCCGGTTACAGGGCGGCTTCGCTGGGACTGGGTTGATCAGTCCGCTGATTAATATGATGAAAACGGCAACCCG
584 sTyrTrpGlnAlaLeuTrpArgLeuProArgLeuGlyPheValTrpAspTyrValAspGlnSerLeuIleLysTyrAspGluAsnGlyAsnGlnPro
2601 TGGTCCGCTTACGGCGGTGATTTGGCGATACGCCGAACGATCGCCAGTCTGTATGAAACCGTCTGGTCTTTGCGGACCGCAGCCGATCCAGCGCTGA
618 TrpSerAlaTyrGlyGlyAspPheGlyAspThrProAsnAspArgGlnPheCysMetAsnGlyLeuValPheAlaAspArgThrProHisProAlaLeuT
2701 CGGAAGCAAAACACCAGCAGCAGTTTTTCCAGTTCGGTTTATCCGGGCAAACCATCGAAGTGACCAGCGAATACCTGTTCCGTCATAGCGATAACGAGCT
651 hrGluAlaLysHisGlnGlnGlnPhePheGlnPheArgLeuSerGlyGlnThrIleGluValThrSerGluTyrLeuPheArgHisSerAspAsnGluLe
2801 CCTGCACTGGATGGTGGCGCTGGATAGCGCTGGCAAGCGGTGAAGTCCCTCTGGATTCGCTCCACAAGGTAACAGTTGATTGAAGTGCCTGAA
684 uLeuHisTrpMetValAlaLeuAspGlyLysProLeuAlaSerGlyGluValProLeuAspValAlaProGlnGlyLysGlnLeuIleGluLeuProGlu
2901 CTACCGCAGCCGAGAGCGCGGGCAACTCTGGCTCACAGTACCGGTAGTGCACCGAACCGGACCGCATGGTCAAGAGCCGGGCACATCAGCGCTGGC
718 LeuProGlnProGluSerAlaGlyGlnLeuTrpLeuThrValArgValValGlnProAsnAlaThrAlaTrpSerGluAlaGlyHisIleSerAlaTrpG
3001 AGCAGTGGCGCTTGGCGGAAAACCTCAGTGTGACGCTCCCGCCGCTCCACCGCATCCCGCATCTGACCACCAGCGAAATGGATTTTTGCATCGAGCT
751 InGlnTrpArgLeuAlaLeuAsnLeuSerValThrLeuAlaAlaGlnSerHisAlaIleProHisLeuThrThrSerGluMetAspPheCysIleGluLeu
3101 GGTAATAAGCGTTGGCAATTTAACCGCAGTCAAGCTTTCTTTACAGATGTGGATTGGCGATAAAAAACAACTGCTGACGCGCTGCGCGCATCAGTTC
784 uGlyAsnLysArgTrpGlnPheAsnArgGlnSerGlyPheLeuSerGlnMetTrpIleGlyAspLysLysGlnLeuLeuThrProLeuArgAspGlnPhe
3201 ACCCGTGCACCGCTGGATAACGACATTTGGCGTAAGTGAAGCGACCCGATTGACCTAACCGCTGGTTCGAACGCTGGAAGGCGGGCGGCCATTACCAGG
818 ThrArgAlaProLeuAspAsnAspIleGlyValSerGluAlaThrArgIleAspProAsnAlaTrpValGluArgTrpLysAlaAlaGlyHisTyrGlnA
3301 CCGAAGCAGCGTTGTTGAGTGCACGGCAGATACACTGTGTATGCGGTGCTGATTACGACCGCTCAGCGTGGCAGCATCAGGGGAAAACCTTATTTAT
851 laGluAlaAlaLeuLeuGlnCysThrAlaAspThrLeuAlaAspAlaValLeuIleThrThrAlaHisAlaTrpGlnHisGlnGlyLysThrLeuPheI
3401 CAGCCGAAAACCTACCGGATTGATGGTAGTGGTCAAATGGCGATTACCGTTGATGTTGAAGTGGCGAGGATACACCGCATCCGGCGGGATTGGCGCTG
884 eSerArgLysThrTyrArgIleAspGlySerGlyGlnMetAlaIleThrValAspValGluValAlaSerAspThrProHisProAlaArgIleGlyLeu
3501 AACTGCCAGCTGGCGCAGGTAGCAGAGCGGTAACCTGGCTCGGATTAGGGCCGCAAGAAAACCTATCCGACCGCCTTACTGCGCGCTGTTTTGACCGCT
918 AsnCysGlnLeuAlaGlnValAlaGluArgValAsnTrpLeuGlyLeuGlyProGlnGluAsnTyrProAspArgLeuThrAlaAlaCysPheAspArgT

3601 GGGATCTGCCATTGTCCAGACATGTATACCCCGTACGTCTCCCGAGCGAAAACGGTCTGCGCTGCGGGACGCGCGAATTGAATTATGGCCCACACCAGTG
 951▶ rpAspLeuProLeuSerAspMetTyrThrProTyrValPheProSerGluAsnGlyLeuArgCysGlyThrArgGluLeuAsnTyrGlyProHisGlnTr
 3701 GCGGGCGGACTTCCAGTTCAACATCAGCCGCTACAGTCAACAGCAACTGATGAAACCAGCCATCGCCATCTGCTGCACGCGGAAGAAGGCACATGGCTG
 984▶ pArgGlyAspPheGlnPheAsnIeSerArgTyrSerGlnGlnGlnLeuMetGluThrSerHisArgHisLeuLeuHisAlaGluGluGlyThrTrpLeu
 3801 AATATCGACGGTTTCCATATGGGGATTGGTGGCGCAGACTCCTGGAGCCCGTCAGTATCGGCGGAATTACAGCTGAGCGCGGTGCTACCATTACCAGT
 1018▶ AsnIeAspGlyPheHisMetGlyIleGlyGlyAspAspSerTrpSerProSerValSerAlaGluLeuGlnLeuSerAlaGlyArgTyrHisTyrGlnL

EcoRI (3934)

3901 TGGTCTGGTGTCAAAAATAATAATCTAGTCGAGAATTCGCTAGCTCGACATGATAAGATACATTGATGAGTTTGGACAAACCACAAC TAGAATGCAGTGA
 1051▶ euValTrpCysGlnLys•••

4001 AAAAAATGCTTTATTTCGTGAAATTTGTGATGCTATTGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACA

4101 AGTTAACAACAACAATTGCATTCATTTTATGTTTTAGGTTTCAGGTTTCAGGGGGAGGTGTGGGAGGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTAGATCC

PacI (4215)

4201 ATTTAAATGTTAAATTAAGTCCATGACCAAAATCCCTTAACGTGAGTTTTTCGTTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTG
 4301 AGATCCTTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAACCCGCTACCAGCGGTGTTTGTGTTGCCGGATCAAGAGCTACCAACTCTTTTT

4401 CCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACAAATACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACCCTCAAGAAGTCTGTAGCACCAGCCTA
 4501 CATACTCGCTCTGCTAATCCTGTTACCAGTGCTGCTGCCAGTGGCGATAAGTCTGTCTTACCGGTTGGACTCAAGACGATAGTTACCGGATAAGGC

4601 GCAGCGTTCGGGCTGAACGGGGGTTCTGTCACACAGCCAGCTTGGAGCGAACGACCTACACCGAAGTACCTACAGCGTGAGCTATGAGAAAGC
 4701 GCCACGTTCCCGAAGGGAGAAAGCGGCAGGTATCCGTAAGCGGCAGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGAAACGCCTGGT

4801 ATCTTTATAGTCTGTCCGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGCGGAGCCTATGAAAAACGCCAGCAACGC

PacI (4955)

4901 GGCCTTTTACGGTTCCTGGCCTTTTGTGCGCCTTTTGTCTCACATGTTCTTAATTAATTTTCAAAGTAGTTGACAATTAATCATCGGCATAGTATAT

5001 CGGCATAGTATAATACGACTCACTATAAGGAGGGCCATCATGGCCAAGTTGACCAGTGTCTCCAGTGTCCAGTGTCCAGCCAGGGATGTGGCTGGAGCTGTTGA
 1▶ MetAlaLysLeuThrSerAlaValProValLeuThrAlaArgAspValAlaGlyAlaValGI

5101 GTTCTGGACTGACAGTTGGGTTCTCCAGAGATTTTGTGGAGGATGACTTTGCAGGTGTGGTCAGAGATGATGTCACCCTGTTATCTCAGCAGTCCAG
 21▶ uPheTrpThrAspArgLeuGlyPheSerArgAspPheValGluAspAspPheAlaGlyValValArgAspAspValThrLeuPheIeSerAlaValGln

5201 GACCAGGTGGTGCCTGACAACCCCTGGCTTGGGTGTGGGTGAGAGGACTGGATGAGCTGTATGCTGAGTGGAGTGGGTGCTCCACCAACTTCAGGG
 55▶ AspGlnValValProAspAsnThrLeuAlaTrpValTrpValArgGlyLeuAspGluLeuTyrAlaGluTrpSerGluValValSerThrAsnPheArgA

5301 ATGCCAGTGGCCCTGCCATGACAGAGATTGGAGAGCAGCCCTGGGGGAGAGAGTTTGCCTGAGAGCCAGCAGGCAACTGTGTGCACTTTGTGGCAGA
 88▶ spAlaSerGlyProAlaMetThrGluIleGlyGluGlnProTrpGlyArgGluPheAlaLeuArgAspProAlaGlyAsnCysValHisPheValAlaGI

PacI (5471)

5401 GGAGCAGGACTGAGGATAAGAATTGAGTTTCAGAAAAGGGGCTGAGTGGCCCTTTTTTCAACTTAATTAA
 121▶ uGluGlnAsp•••