

PstI (7) SpeI (14)

1 CTCTGAGGGCCACTAGTGC GGTTACCAGCGGAAATGCCTCGGGGT CAGAAGTCG CAGGAGAGATAGACAGCTGCTGAACCAATGGGACCAGCGGATGGG
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201 CGAATCGGCGGGCCAGCTTGGTGGCTGGGCCAATGAACGGCCTCCAACGAGCAGGGCCTTACCAATCGGGCGCTCCACGACGGGGCTGGGGAGG
301 GTATATAAGCCGAGTAGGCGACGGTGAGGTGACGCCGGCCAAGACAGCACAGACAGATTGACCTATTGGGTGTTTCGCGAGTGTGAGAGGGAAGCCGC
401 GCGGCTGTATTCTAGACCTGCCCTTCGCTGGTTCGTGGCGCCTTGTGACCCCGGGCCCTGCGGCTGCAAGTCGGAATTGCGCTGTGCTCTGTG

NeoI (548)

501 CTACGGCTGTGGTGGACTGCCTGCTGCTGCCAACTGGTGGCACCATGGGGGTTCTCATCATCATCATCATCATGGTATGGCTAGCATGACTGGT
601 GACAGCAAATGGTTCGGATCTGTACGACGATGACGATAAGGTAACCTAAGGATCAGCTGGAGTTGATCCCGTCGTTTACAACGCTGACTGGGAAAA
181 yGlnGlnMetGlyArgAspLeuTyrAspAspAspLysValProLysAspGlnLeuGlyValAspProValValLeuHisGlnArgAspTrpGluAs
701 CCCTGGCGTTACCAACTTAATCGCCTTGACGACATCCCCCTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCAGTCCGCTTCCCAACAGTTG
511 nProGlyValThrGlnLeuAsnArgLeuAlaAlaHisProProPheAlaSerTrpArgAsnSerGluGluAlaArgThrAspArgProSerGlnGlnLeu
801 CGCAGCTGAATGGCGAATGGCGCTTTCGCTGGTTCGCCGCCAGAGCGGTGCGCGAAAGCTGGTGGAGTGCATCTTCCCTGAGGCCGATACTGTCG
851 ArgSerLeuAsnGlyGluTrpArgPheAlaTrpPheProAlaProGluAlaValProGluSerTrpLeuGluCysAspLeuProGluAlaAspThrValV
901 TCGTCCCCTCAAACGGCAGATGCAGGTTACGATGCCCCATCTACCAACGTAACCTATCCATTACGGTCAATCGCGGCTTTCGCCAGGAA
1181 alValProSerAsnTrpGlnMetHisGlyTyrAspAlaProl leTyrThrAsnValThrTyrProl leThrValAsnProProPheValProThrGluAs
1001 TCCGACGGGTTGTACTCGCTCACATTAATGTTGATGAAAGCTGGTACAGGAAGGCCAGACGCGAATTATTTTGTATGGCGTTAACTCGCGGTTTCAT
1511 nProThrGlyCysTyrSerLeuThrPheAsnValAspGluSerTrpLeuGlnGluGlyGlnThrArgI leI lePheAspGlyValAsnSerAlaPheHis
1101 CTGTGGTCAACGGCGCTGGTGGTTCAGGCCAGGACAGTTCGTTGCCGCTGAATTTGACCTGAGCGCATTTTACGCGCGGAGAAAAACCGCTCG
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1201 CGGTGATGGTGTGCTGGTGGAGTGACGGCAGTTATCTGGAAGATCAGGATATGTGGCGGATGAGCGGCATTTTCCGTCGCTCGTGTGCTGCATAAAC
2181 laValMetValLeuArgTrpSerAspGlySerTyrLeuGluAspGlnAspMetTrpArgMetSerGlyI lePheArgAspValSerLeuLeuHisLysPr
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2601 CTGCACTGGATGGTGGCGTGGATGGTAAGCCGCTGGCAAGCGGTGAAGTGCCTCTGGATGTCGCTCCACAAGGTAACAGTTGATTGAAGTGCCTGAAC
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2701 TACCGCAGCCGAGAGCGCGGCAACTCTGGCTCACAGTACCGGTAGTGAACCGAACCGACCGCATGGTCAGAAGCGGGCACATCAGCGCTGGCA
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2801 GCAGTGGCGTCTGGCGGAAACCTCAGTGTGACGCTCCCGCGCGCTCCACGCCATCCCGCATCTGACCACCAGCGAAATGGATTTTGCATCGAGCTG
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3501 CGCGGCACTTCCAGTTCAACATCAGCCGCTACAGTCAACAGCACTGATGGAACACCGCATCGCCATCTGCTGCACGCGGAGAAGGCACATGGCTGA
9851 ArgGlyAspPheGlnPheAsnI leSerArgTyrSerGlnGlnGlnLeuMetGluThrSerHisArgHisLeuLeuHisAlaGluGluGlyThrTrpLeuA

3601 ATATCGACGGTTTCCATATGGGGATTGGTGGCGACGACTCCTGGAGCCCGTCAGTATCGGGGAATTACAGCTGAGCGCCGGTCGCTACCATTACCAGTT
1018▶ snI leAspGlyPheHisMetGlyI leGlyGlyAspAspSerTrpSerProSerValSerAlaGluLeuGlnLeuSerAlaGlyArgTyrHisTyrGlnLe

EcoRI (3733)

3701 GGTCTGGTGTCAAAAATAATAATCTAGTCGAGAATTCGCTAGCTCGACATGATAAGATACATTGATGAGTTTGGACAAAACCAACTAGAATGCAGTGAA
1051▶ uValTrpCysGlnLys•••

3801 AAAAATGCCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAA

3901 GTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGGAGGTGTGGGAGGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTAGATCCA

PacI (4014)

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4201 CGAAGGTAACCTGGCTTCAGCAGAGCGCAGATACCAAATACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTAC

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PacI (4754)

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4801 GGCATAGTATAATACGACTCACTATAGGAGGGCCATCATGGCCAAGTTGACCAGTGTGCTCCAGTGTCTCACAGCCAGGGATGTGGCTGGAGCTGTTGA

1▶ MetAlaLysLeuThrSerAlaValProValLeuThrAlaArgAspValAlaGlyAlaValGI

4900 GTTCTGGACTGACAGTTGGGGTCTCCAGAGATTTTGTGGAGGATGACTTTGCAGGTGTGGTCAGAGATGATGTCACCCTGTCATCTCAGCAGTCCAG

21▶ uPheTrpThrAspArgLeuGlyPheSerArgAspPheValGluAspAspPheAlaGlyValValArgAspAspValThrLeuPheI leSerAlaValGln

5000 GACCAGTGGTGCCTGACAACACCCTGGCTTGGGTGTGGGTGAGAGGACTGGATGAGCTGTATGCTGAGTGGAGTGGAGTGGTCTCCACCAACTTCAGGG

55▶ AspGlnValValProAspAsnThrLeuAlaTrpValTrpValArgGlyLeuAspGluLeuTyrAlaGluTrpSerGluValValSerThrAsnPheArgA

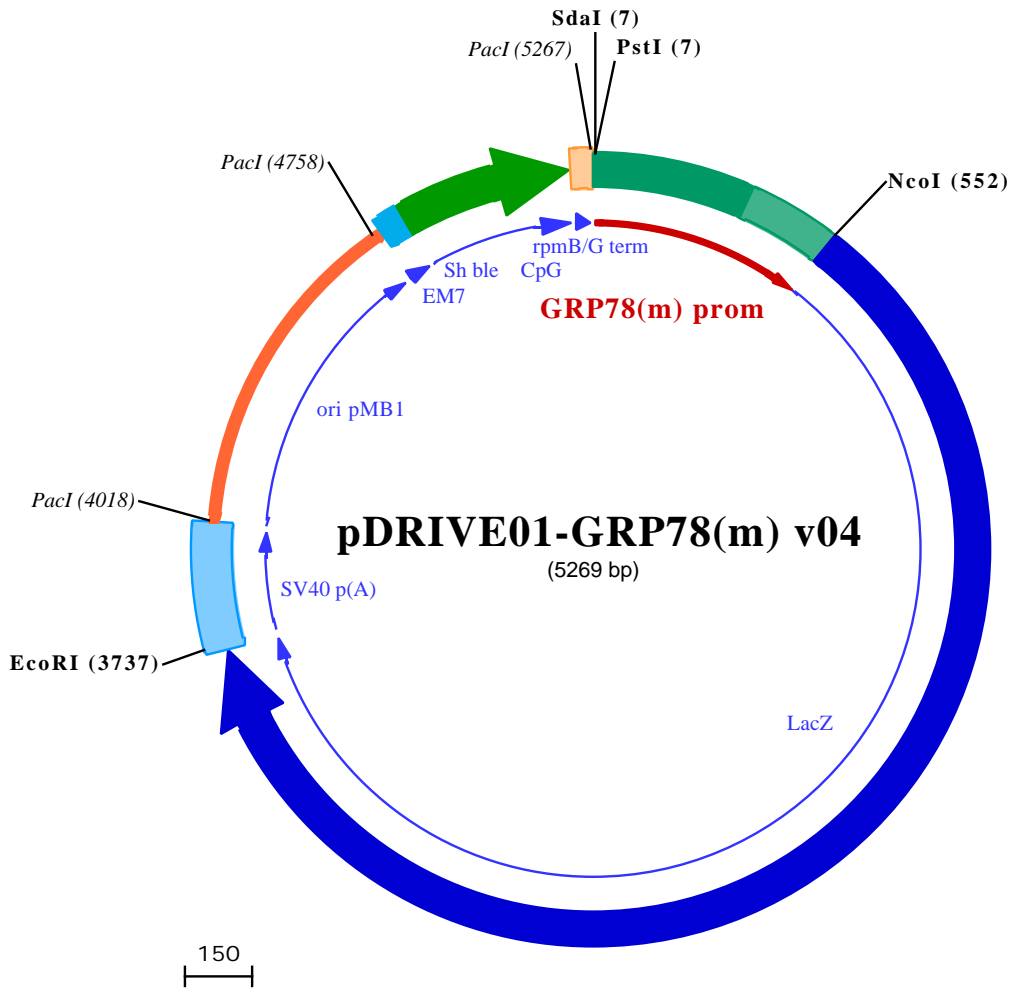
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88▶ spAlaSerGlyProAlaMetThrGluI leGlyGluGlnProTrpGlyArgGluPheAlaLeuArgAspProAlaGlyAsnCysValHisPheValAlaGI

PacI (5263)

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121▶ uGluGlnAsp•••



PstI (7)
SdaI (7)

1 CCTGCAGGTTACCGCGGAAACGGTCTCGGGGTGAGAGGTACCCGAAGGACAGGCAGCTGCTGAACCAATAGGACCAGCGCTCAGGGCGGATGCTGCCT
101 CTCATTGGTGGCCGTTAAGAATGACCAGTAGCCAATGAGTCAGCCCGGGGGCGTAGCAATGACGTGAGTTGCGGAGGAGGCCGCTTCAATCGGCAGCA
201 GCCAGCTTGGTGGCATGGACCAATCAGCGGCTCCAACGAGTAGCGACTTACCAATCGGAGGCTCCACGACGGGGCTGTGGGGAGGGTATATAAGGGC
301 AGTCGGCGACGGCGGCTCGATACTGGCCGAGACAACACTGACCTGGACACTTGGGCTTCTGCGTGTGTGTGAGGTAAGCGCCGGCGCTGCTGCTAGGC
401 CTGCTCCGAGTCTGCTTCTGTCTCCTCTGACCCCGAGGCCCTGTGCGCCTCAGACCAGAACCGTCTGCGGTTTCGGGGCCACAGCCTGTGTGGA

NeoI (552)

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601 GGTGGACAGCAATGGGTCGGGATCTGTACGACGATGACGATAAGGTACCTAAGGATCAGCTTGGAGTTGATCCCGTCTTTTACAACGTCGTGACTGGG
17 GlyGlyGlnGlnMetGlyArgAspLeuTyrAspAspAspAspLysValProLysAspGlnLeuGlyValAspProValValLeuGlnArgArgAspTrpG
701 AAAACCTTGGCGTTACCAACTTAATCGCCTTGACGACATCCCCCTTTCGCGAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTCCCAACA
50 luAsnProGlyValThrGlnLeuAsnArgLeuAlaAlaHisProPheAlaSerTrpArgAsnSerGluGluAlaArgThrAspArgProSerGlnG1
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83 nLeuArgSerLeuAsnGlyTrpArgPheAlaTrpPheAlaProGluAlaValProGluSerTrpLeuGluCysAspLeuProGluAlaAspThr
901 GTCGTCGTCCTCAAACCTGGCAGATGCAGGTTACGATGCGCCATCTACACCAACGTAACCTATCCCATACGGTCAATCCGCGCTTGTCCACGG
117 ValValValProSerAsnTrpGlnMetHisGlyTyrAspAlaProIeTyrThrAsnValThrTyrProIeThrValAsnProProPheValProThrG
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183 eHisLeuTrpCysAsnGlyArgTrpValGlyTyrGlyGlnAspSerArgLeuProSerGluPheAspLeuSerAlaPheLeuArgAlaGlyGluAsnArg
1201 CTCGCGGTGATGGTGTGCTGGTGGAGTGACGGCAGTTATCTGGAAGATCAGGATATGTGGCGGATGAGCGGCATTTTCCGTCAGCTCTCGTTGCTGCATA
217 LeuAlaValMetValLeuArgTrpSerAspGlySerTyrLeuGluAspGlnAspMetTrpArgMetSerGlyIlePheArgAspValSerLeuLeuHisL
1301 AACCGACTACAAAACAGCGATTTCCATGTTGCCACTCGCTTAAATGATGATTTACGCGCGCTGTACTGGAGGCTGAAGTTCAGATGTGGCGGAGTT
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283 uArgAspTyrLeuArgValThrValSerLeuTrpGlnGlyGluThrGlnValAlaSerGlyThrAlaProPheGlyGlyGluIleIeAspGluArgGly
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483 sProSerValIleIeTrpSerLeuGlyAsnGlyHisGlyAlaAsnThrIeGluHisAspAlaLeuTyrArgTrpIleLysSerValAspAlaAspProSerArg
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650 ueThrGluAlaGlyHisGlnGlnPheGlnPheArgLeuHisGlyAlaAsnThrIeGluValThrSerGluTyrLeuAspArgHisSerAspAsnG1
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750 rpGlnGlnTrpArgLeuAlaGlnValAlaGluArgValAsnTrpLeuProAlaAlaSerHisAlaIleProHisLeuThrThrAspPheCysIleG
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817 PheThrArgAlaGlyValAspAsnAspIleGlyValSerGlyAlaThrArgIleAspTrpAsnAlaTrpValGluArgTrpLysAlaAlaGlyHisTyrG
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EcoRI (3737)

3701 AGTTGGTCTGGTGTCAAAAATAATAATCTAGTCGAGAATTCGCTAGCTCGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAG
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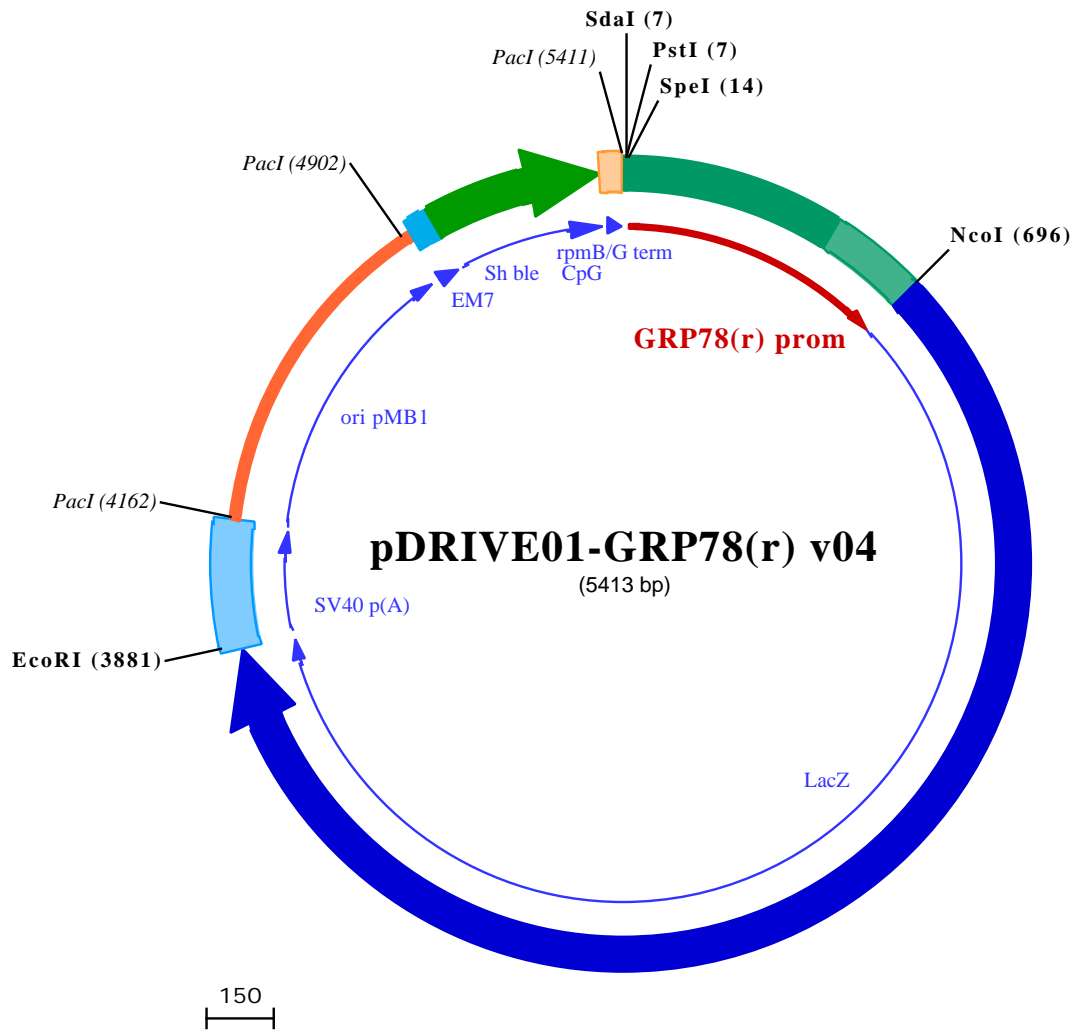
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PacI (4018)

4001 TCCATTTAAATGTTAATTAACCTAGCCATGACCAAAATCCCTTAACGTGAGTTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTC
4101 TTGAGATCCTTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAACACCGCTACCAGCGGTGTTTGTGGCCGATCAAGAGCTACCAACTCTT
4201 TTTCCGAAGGTAACCTGGCTTCAGCAGAGCGCAGATACCAAATACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACCCTCAAGAACTCTGTAGCACCGC
4301 CTACATACCTCGCTCTGCTAATCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTCTTACCAGGTTGGACTCAAGACGATAGTTACCGGATAA
4401 GCGCGACGCGTTCGGCTGAACGGGGGTTTCGTGCACACAGCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAA
4501 AGCGCCACGCTTCCCGAAGGGAGAAAGCGGCAGAGTATCCGGTAAGCGGCAGGCTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGAAACGCCT
4601 GGTATCTTTATAGTCTGTGCGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGCGGAGCCTATGAAAAACGCCAGCAA
PacI (4758)

4701 CGCGGCCTTTTTACGGTTCCTGGCCTTTTGTGCGCTTTTGTCTACATGTTCTTAATTAATTTTTTCAAAGTAGTTGACAATTAATCATCGGCATAGTA
4801 TATCGGCATAGTATAATACGACTCACTATAGGAGGGCCATCATGGCCAAGTTGACCAGTGTCTCCAGTGTCTCACAGCCAGGGATGTGGCTGGAGCTGT
1▶ MetAlaLysLeuThrSerAlaValProValLeuThrAlaArgAspValAlaGlyAlaVa
4901 TGAGTCTGGACTGACAGGTTGGGGTTCCTCAGAGATTTTGTGGAGGATGACTTTCAGGTGTGGTCAGAGATGATGCACCCTGTTTCATCTCAGCAGTC
20▶ IGluPheTrpThrAspArgLeuGlyPheSerArgAspPheValGluAspAspPheAlaGlyValValArgAspAspValThrLeuPheI leSerAlaVal
5001 CAGGACCAGGTGGTGCCTGACAACCCCTGGCTTGGGTGTGGTGAGAGGACTGGATGAGCTGTATGCTGAGTGGAGTGAGGTGGTCTCCACCAACTTCA
54▶ GlnAspGlnValValProAspAsnThrLeuAlaTrpValTrpValArgGlyLeuAspGluLeuTyrAlaGluTrpSerGluValValSerThrAsnPheA
5101 GGGATGCCAGTGGCCCTGCCATGACAGAGATTGGAGAGCAGCCCTGGGGAGAGAGTTTGCCTGAGAGACCCAGCAGGCAACTGTGTGACTTTGTGGC
87▶ rgAspAlaSerGlyProAlaMetThrGluI leGlyGluGlnProTrpGlyArgGluPheAlaLeuArgAspProAlaGlyAsnCysValHisPheValAl
PacI (5267)

5201 AGAGGAGCAGGACTGAGGATAAGAATTGTAACAAAAACCCCGCCCGGGGGTTTTTTGTTAATTAA
120▶ aGluGluGlnAsp•••



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

1 CCTGCAGGGCCACTAGTCGGGAGCGGTACTTCTTCCGAGTGAGAGACAGAAAGAGAGGCCGAGTCTCACAGCCCTGAGGGAAGTACACGCAGACC
101 CCACTCCAGTCCCCGGGGGCCAACGTGAGGGGAGGACTGGACGGTTACCGCGGAAACGGTTTCCAGGTGAGAGGTCACCCGAGGGACAGGCAGCTGC
201 TCAACCAATAGGACCAGCTCTCAGGGCGGATGCTGCCTCTCATTGGCGGCGTTAAGAATGACCAGTAGCCAATGAGTCGGCCTGGGGGGGTACCAGTG
301 ACGTGAGTTGCGGAGGAGGCGCTTCCAATCGGCAGCGGCCAGCTTGGTGGCATGAACCAACCAGCGGCCTCCAACGAGTAGCGAGTTCACCAATCGGAG
401 CCCTCCACGACGGGGCTGCGGGGAGGATATATAAGCCGAGTCGGCGACCGGCGCTCGATACTGGCTGTGACTACACTGACTTGGACACTTGGCCTTTT
501 CGGGGTTTGAGAGGTAAGCGTGGCGGCTGCTTCCAGGCCTACCCTGATTTTGGTTCGTGGCTCCTCTGACCTGAGACCTCTGTGCGCCTCAGATCAG
601 AACCGTCGTCGGGTTTCGGGGTACAGCCTGTGCTGGACTCTGTGAGACACCTGACCGACCGCTGAGCGACTGACTGGTCCACAGCGCCGGCACCATGGG
NcoI (696)
MetG
701 GGGGTTCTCATCATCATCATCATGGTATGGCTAGCATGACTGGTGGACAGCAAAATGGGTGGGATCTGTACGACGATGACGATAAGGTACCTAAGGA
2 lyGlySerHisHisHisHisHisHisGlyMetAlaSerMetThrGlyGlyGlnGlnMetGlyArgAspLeuTyrAspAspAspLysValProLysAs
801 TCAGTTGGAGTTGATCCCGTCGTTTACAACGTCGTACTGGGAAAACCTGGCGTTACCCAACCTAATCGCCTTTCAGCAGATCCCCCTTTCGCCAGC
35 pGlnLeuGlyValAspProValValLeuGlnArgArgAspTrpGluAsnProGlyValThrGlnLeuAsnArgLeuAlaAlaHisProProPheAlaSer
901 TGGCGTAATAGCGAAGAGGCGCCGACCGATCGCCCTTCCAACAGTTGGCGAGCCTGAATGGCGAATGGCGCTTTCCTGGTTTCGGCCACCAGAGCGG
69 TrpArgAsnSerGluGluAlaArgThrAspArgProSerGlnGlnLeuArgSerLeuAsnGlyGluTrpArgPheAlaTrpPheProAlaProGluAlaV
1001 TGCCGAAAGCTGGCTGGAGTGGCATCTTCTGAGGCCGATACTGTCGTGCTCCCTCAAACCTGGCAGATGCACGGTTACGATGGCCCATCTACACCAA
102 alProGluSerTrpLeuGluCysAspLeuProGluAlaAlaAspThrValValValProSerAsnTrpGlnMetHisGlyTyrAspAlaPro leTyrThrAs
1101 CGTAACCTATCCATTACGGTCAATCCGCGTTGTGTTCCACGGGAATCCGACGGGTTGTTACTCGCTCACATTTAATGTTGATGAAAGCTGGCTCAG
135 nValThrTyrProI leThrValAsnProProPheValProThrGluAsnProThrGlyCysTyrSerLeuThrPheAsnValAspGluSerTrpLeuGln
1201 GAAGCCAGACGCGAATATTTTGTAGTGGCGTAACTCGGCGTTTCACTGTGGTGCACGGGCGCTGGGTCGGTTACGGCCAGGACAGTCGTTTCCCGT
169 GluGlyGlnThrArgI leI lePheAspGlyValAsnSerAlaPheHisLeuTrpCysAsnGlyArgTrpValGlyTyrGlyGlnAspSerArgLeuProS
1301 CTGAATTTGACCTGAGCGCATTTTACGCGCCGGAGAAAACCGCCTCGCGGTGATGGTGTGCTGGTGGAGTGCACGCGAGTTACTGGAAGATCAGGATAT
202 erGluPheAspLeuSerAlaPheLeuArgAlaGlyGluAsnArgLeuAlaValMetValLeuArgTrpSerAspGlySerTyrLeuGluAspGlnAspMe
1401 GTGGCGGATGAGCGCATTTTCCGTGACGTCCTGTTGCTGCATAAACCAGCTACACAAATCAGCGATTTCCATGTTGCCACTCGCTTAAATGATGATTTT
235 tTrpArgMetSerGlyI lePheArgAspValSerLeuLeuHisLysProThrThrGlnI leSerAspPheHisValAlaThrArgPheAsnAspAspPhe
1501 AGCCGCGCTGACTGGAGGCTGAAGTTCAGATGTGCGCGGAGTTGCGTGACTACCTACGGGTAACAGTTTCTTTATGGCAGGGTGAACCGCAGGTCGCCA
269 SerArgAlaValLeuGluAlaGluValGlnMetCysGlyGluLeuArgAspTyrLeuArgValThrValSerLeuTrpGlnGlyGluThrValAlaS
1601 CGGGCACCAGCGCTTTCGGCGGTGAAATTATCGATGAGCGTGGTGGTTATGCGCATCGCGTACACTACGCTGAACGCTGAAAACCCGAAACTGTGGAG
302 erGlyThrAlaProPheGlyGlyGluI leI leAspGluArgGlyGlyTyrAlaAspArgValThrLeuArgLeuAsnValGluAsnProLysLeuTrpSe
1701 CGCGAAATCCCGAATCTCTATCGTGGCGTGTGAACCTGCACACCGCCGACGGCAGCTGATTGAAGCAGAAGCCTGCGATGTCGGTTTCCGCGAGGTG
335 rAlaGluI leProAsnLeuTyrArgAlaValValGluLeuHisThrAlaAspGlyThrLeuI leGluAlaGluAlaCysAspValGlyPheArgGluVal
1801 CGGATGAAAATGGTCTGCTGCTGCTGAACGGCAAGCCGTTGCTGATTTCAGGCGTTAACCGTCACGAGCATCATCTGCTGATGGTCAGGTCATGGATG
369 ArgI leGluAsnGlyLeuLeuAsnGlyLysProLeuLeuI leGluArgValAsnArgHisProLeuHisHisProLeuHisGlyGlnValMetAspG
1901 AGCAGACGATGGTGCAGGATATCTGCTGATGAAGCAGAACAACCTTAAACCGCGTGGCTGTTCGCATTATCCGAACCATCCGCTGTGGTACACGCTGTG
402 luGlnThrMetValGlnAspI leLeuLeuMetLysGlnAsnAsnPheAsnAlaValArgCysSerHisTyrProAsnHisProLeuTrpTyrThrLeuCy
2001 CGACCGCTACGGCCTGTATGTTGGTGAAGCCAATATTGAAACCCACGGCATGGTGCCAATGAATCGTCTGACCGATGATCCGCGCTGGCTACCGCGG
435 sAspArgTyrGlyLeuThrValValAspGluAlaAsnI leGluThrHisGlyMetValProMetAsnArgLeuThrAspProArgTrpLeuProAla
2101 ATGAGCGAAGCGTAACCGAATGGTGCAGCGCATCGTAATCACCGAGCTGATCATCTGGTGGTGGGAAATGAATCAGGCCACGGCGCTAATCAGC
469 MetSerGluArgValThrArgMetValGlnArgAspArgAsnHisProSerVal I leI leTrpSerLeuGlyAsnGluSerGlyHisGlyAlaAsnHisA
2201 ACGCGCTGATCGCTGGATCAAATCTGCTGATCCTTCCGCGCGGTGAGTGAAGGCGCGGAGCCGACACCACCGCCACCGATATTATTGCCCGAT
502 spAlaLeuTyrArgTrpI leLysSerValAspProSerArgProValGlnTyrGluGlyGlyAlaAspThrThrAlaThrAspI leI leCysProMe
2301 GTACGCGCGTGGATGAAGACAGCCCTTCCGCGTGTGCCAAATGGTCCATAAAAAATGGCTTTCGCTACCTGGAGAGACGGCCCGCTGATCCTT
535 tTyrAlaArgValAspGluAspGlnProPheProAlaValProLysTrpSerI leLysLysTrpLeuSerLeuProLeuThrArgProLeuI leLeu
2401 TGCGAATACGCCACCGCATGGTACAGTCTTGGCGGTTTCGCTAAATACTGGCAGGCGTTTCGTCAGTATCCCGTTTACAGGGCGGCTTCGCTGGG
569 CysGluTyrAlaHisAlaMetGlyAsnSerLeuGlyGlyPheAlaLysTyrTrpGlnAlaPheArgGlnTyrProArgLeuGlnGlyGlyPheValTrpA
2501 ACTGGGTGGATCAGTCGCTGATTAATATGATGAAAACGGCAACCCGTGGTTCGGCTTACGGCGGTGATTTTGGCGATACGCCAAGCATCGCCAGTTCG
602 spTrpValAspGluThrValValAspGluAlaAsnI leLysTyrAspGluAsnGlyAsnProTrpSerAlaTyrGlyAspPheGlyAspThrProArgGlnPheCy
2601 TATGAACGGTCTGGTCTTTGGCGACCGCACCGCATCCAGCGCTGACCGGAAGCAAAACACCAGCAGCATTTTCCAGTTCGCTTATCCGGGCAAAAC
635 sMetAsnGlyLeuValPheAlaAspArgThrProHisProAlaLeuThrGluAlaLysHisGlnGlnGlnPhePheGlnPheArgLeuSerGlyGlnThr
2701 ATCGAAGTGACCAGCAATACCTGTTCCGCTATAGCGATAACGAGCTCCTGCACTGGATGGTGGCGCTGGATGGTAAGCCGCTGGCAAGCGGTGAAGTGC
669 I leGluValThrSerGluTyrLeuPheArgHisSerAspAsnGluLeuLeuHisTrpMetValAlaLeuAspGlyLysProLeuAlaSerGlyGluValP
2801 CTCTGGATGTCGCTCCACAAGTAAACAGTTGATGAACTGCTGCACTACCGCAGCGGAGAGCGCCGGCAACTCGGCTCACAGTACCGGTAGTGGCA
702 roLeuAspValAlaProGlnGlyLysGlnLeuI leGluLeuProGluLeuProGlnProLeuSerAlaGlyGlnLeuTrpLeuThrValArgValValGI
2901 ACCGAACCGCACCGCATGGTACAGAGCCGGCCACATCAGCGCTGGCAGCAGTGGCGTCTGGCGGAAAACCTCAGTGTGACGCTCCCGCGCGTCCAC
735 nProAsnAlaThrAlaTrpSerGluAlaGlyHisI leSerAlaTrpGlnGlnTrpArgLeuAlaGluAsnLeuSerValThrLeuProAlaAlaSerHis
3001 GCCATCCCGCATCTGACCACAGCGAAATGGATTTTTCATCGAGCTGGGTAATAAGCGTTGGCAATTTAACCGCCAGTCAGGCTTCTTTTCACAGATGT
769 AlaI leProHisLeuThrValValAspGluAlaAsnI leGluThrHisGlyAsnLysArgTrpGlnPheAsnArgGlnPheLeuSerGlnMetT
3101 GGATGGCGATAAAAAACAACCTGCTGACGCGCTGCGGATCAGTTTCAACCGCTGACCGCTGGATAACGACATTGGCGTAAGTGAAGCGACCCGCAATGA
802 rpI leGlyAspLysLysGlnLeuLeuThrProLeuArgAspGlnPheThrArgAlaProLeuAspAsnAspI leGlyValSerGluAlaThrArgI leAs
3201 CCCTAACGCGTGGTTCGACCGTGAAGGCGCGGGCCATTACCAGGCCAAGCAGCGTGTGTCAGTGCACGGCAGATACACTTGCATGCGGTGCTG
835 pProAsnAlaTrpValGluArgTrpLysAlaAlaGlyHisTyrGlnAlaGluAlaAlaLeuLeuGlnCysThrAlaAspThrLeuAlaAspAlaValLeu
3301 ATTACGACCGCTACCGGTGGCAGCATCAGGGAAAACCTTATTTATCAGCCGAAAACCTACCGGATGATGGTAGTGGTCAAATGGCGATTACCGTTG
869 I leThrThrAlaHisAlaTrpGlnHisGlnGlyLysThrLeuPheI leSerArgLysThrTyrArgI leAspGlySerGlyGlnMetAlaI leThrValA
3401 ATGTTGAAGTGGCGAGCGATACACCGCATCCGGCGGGATTGGCCTGAACTGCCAGCTGGCGCAGTAGCAGAGCGGTAACCTGGCTCGGATTAGGGCC
902 spValGluValAlaSerAspThrProHisProAlaArgI leGlyLeuAsnCysGlnLeuAlaGlnValAlaGluArgValAsnTrpLeuGlyLeuGlyPr
3501 GCAAGAAAATATCCGACCGCTTACTGCGCGCTGTTTACCAGCTGGGATCTGCCATTGTGACACATGTATACCCGTCAGTCTTCCGAGCGAAAAC
935 oGlnGluAsnTyrProAspArgLeuThrAlaAlaCysPheAspArgTrpAspLeuProLeuSerAspMetTyrThrProTyrValPheProSerGluAsn

3601 GGTCTGCGCTGCGGGACGCGCAATTGAATTATGGCCACACCAAGTGGCGGGGACTTCCAGTTCAACATCAGCCGTACAGTCAACAGCAACTGATGG
969▶ GlyLeuArgCysGlyThrArgGluLeuAsnTyrGlyProHisGlnTrpArgGlyAspPheGlnPheAsnI leSerArgTyrSerGlnGlnGlnLeuMetG
3701 AAACCAGCCATCGCCATCTGCTGCACGCGGAAGAAGGCACATGGCTGAATATCGACGGTTTCCATATGGGGATTGGTGGCGAGACTCTGGAGCCCGTC
1002▶ luThrSerHisArgHisLeuLeuHisAlaGluGluGlyThrTrpLeuAsnI leAspGlyPheHisMetGlyI leGlyGlyAspAspSerTrpSerProSe
EcoRI (3881)
3801 AGTATCGCGGAATTACAGCTGAGCGCGGTCTGCTACCATTACCAGTTGGTCTGGTGTCAAAAAATAATAATCTAGTCGAGAATTCGCTAGCTCGACATGA
1035▶ rValSerAlaGluLeuGlnLeuSerAlaGlyArgTyrHisTyrGlnLeuValTrpCysGlnLys•••
3901 TAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTGAAATT
4001 TGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCTTTATGTTTCAGGTTTCAGGGGGAGGTGT
PacI (4162)
4101 GGGAGGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTAGATCCATTTAAATGTTAATTAAGTACCCATGACCAAAATCCCTTAACGTGAGTTTTCG
4201 TTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTCTGCGCGTAATCTGCTGCTTGC AAACAAAAAACACCGC
4301 TACCAGCGGTGGTTTTGTTTGGCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAATACTGTTCTTCTAGT
4401 GTAGCCGTAGTTAGGCCACCCTTCAAGAACTCTGTAGCACCCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAG
4501 TCGTGTCTTACC GGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTTCGGGCTGAACGGGGGTTCTGTGCACACAGCCAGCTTGGAGCGAA
4601 CGACCTACACCGAACTGAGATACTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGT
4701 CGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGAAACGCCTGGTATCTTTATAGTCTGTGGGTTTCGCCACCTTGACTTGAGCGTCGATTTTTG
PacI (4902)
4801 TGATGCTCGTCAGGGGGCGGAGCCTATGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGCTGCCTTTTGCTCACATGTTCTTAA
4901 TTAATTTTTCAAAGTAGTTGACAATTAATCATCGGCATAGTATATCGGCATAGTATAATACGACTCACTATAGGAGGGCCATCATGGCCAAGTTGAC
1▶MetAlaLysLeuTh
5000 CAGTGTGTCCAGTGTCTCACAGCCAGGGATGTGGCTGGAGCTGTTGAGTTCTGGACTGACAGGTTGGGGTTCCTCAGAGATTTTGGGAGGATGACTTT
5▶rSerAlaValProValLeuThrAlaArgAspValAlaGlyAlaValGluPheTrpThrAspArgLeuGlyPheSerArgAspPheValGluAspAspPhe
5100 GCAGGTGTGGTCAGAGATGATGTCACCCTGTTTCATCTCAGCAGTCCAGGACCAGGTGGTGCCTGACAACACCCTGGCTTGGGTGGGTTGAGAGGACTGG
39▶AlaGlyValValArgAspAspValThrLeuPheI leSerAlaValGlnAspGlnValValProAspAsnThrLeuAlaTrpValTrpValArgGlyLeuA
5200 ATGAGCTGTATGCTGAGTGGAGTGAGGTGCTCCACCACTCAGGGATGCCAGTGGCCCTGCCATGACAGAGATTGGAGAGCAGCCCTGGGGGAGAGA
72▶spGluLeuTyrAlaGluTrpSerGluValValSerThrAsnPheArgAspAlaSerGlyProAlaMetThrGluI leGlyGluGlnProTrpGlyArgG
5300 GTTGCCCTGAGAGACCAGCAGGCAACTGTGTGCACCTTGTGGCAGAGGAGCAGGACTGAGGATAAGAATTGTAACAAAAACCCCGCCCGGGGGT
105▶uPheAlaLeuArgAspProAlaGlyAsnCysValHisPheValAlaGluGluGlnAsp•••
PacI (5411)
5400 TTTTTGTTAATTAA
▶