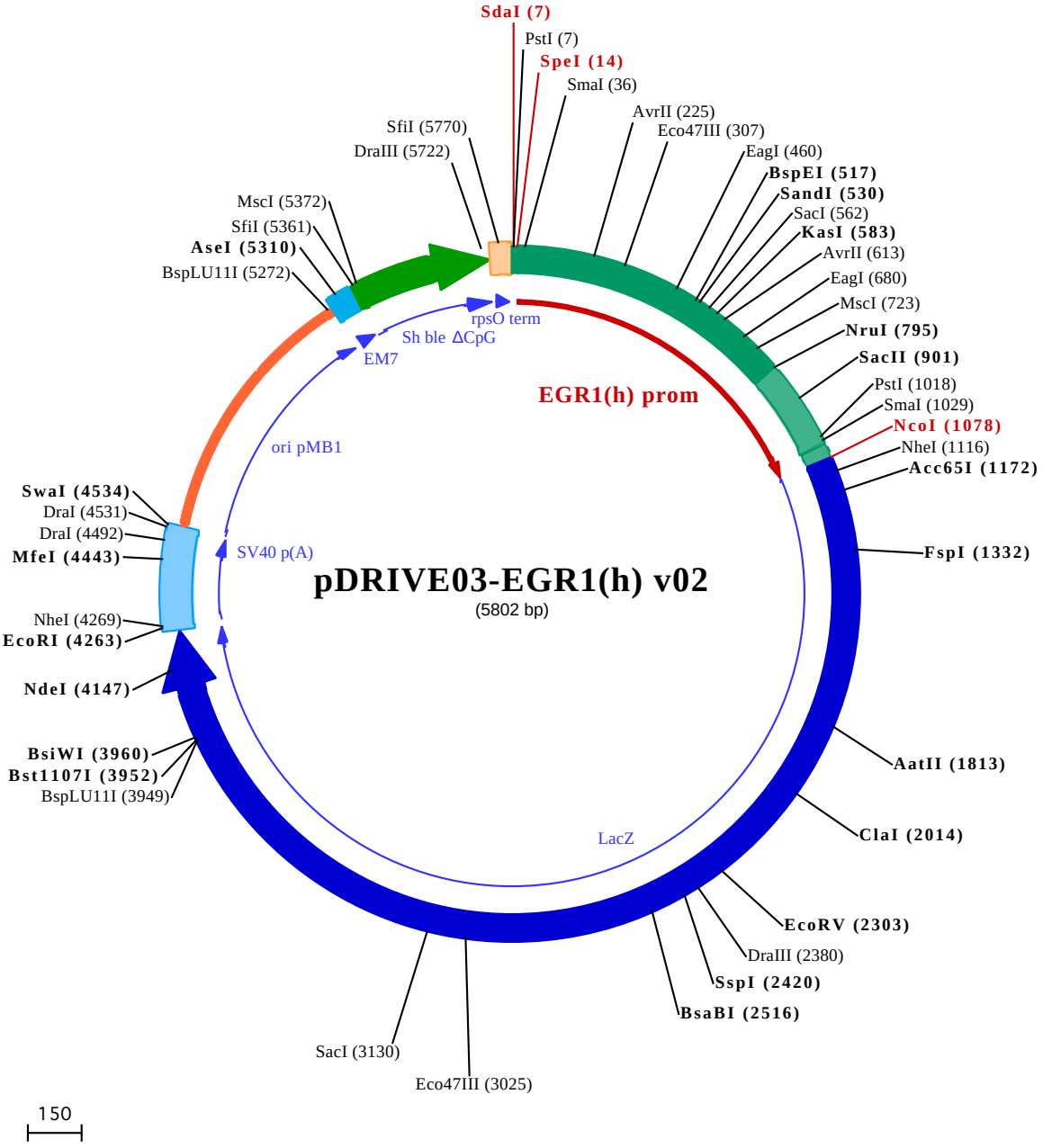
pDRIVE03-EGR1(h) v02
(5802 bp)
SdaI (7)
PstI (7)
SpeI (14)
SmaI (36)
AvrII (225)
Eco47III (307)
EagI (460)
BspEI (517)
SandI (530)
SacI (562)
KasI (583)
AvrII (613)
EagI (680)
MscI (723)
NruI (795)
SacII (901)
PstI (1018)
SmaI (1029)
NcoI (1078)
NheI (1116)
Acc65I (1172)
FspI (1332)
AatII (1813)
ClaI (2014)
EcoRV (2303)
DraIII (2380)
SspI (2420)
BsaBI (2516)
Eco47III (3025)
SacI (3130)
BsiWI (3960)
Bst1107I (3952)
BspLU11I (3949)
NdeI (4147)
NheI (4269)
EcoRI (4263)
MfeI (4443)
DraI (4492)
DraI (4531)
SwaI (4534)
BspLU11I (5272)
AseI (5310)
SfiI (5361)
MscI (5372)
DraIII (5722)
SfiI (5770)
EGR1(h) prom
rpsO term
Sh ble ΔCpG
EM7
ori pMB1
SV40 p(A)
LacZ
150

```
      PstI (7)
      SdaI (7)      SpeI (14)              SmaI (36)
   1  CCTGCAGGGCCCACTAGTGCCATAGATCGAGGCCCGGGGTCAAGGCCCCGCCTCTCCTGGGCGGCCCCTGCCCAGGCGGGCCCAGCCGCTCCTCCCCCGC

 101  ACTCCCGGTTCGCTCTCACGGTCCCTGAGGTGGGCGGGCGGGCCCTGGATGACAGCGATAGAACCCCGGCCCGACTCGCCCTCGCCCCCGCTCTGGGTCT

                                AvrII (225)
 201  GGGCTTCCCCAGCCTAGTTCACGCCTAGGAGCCGCCTGAGCAGCCGCGCGCCCAGCGCCACACGCCACGAGCCCTCCCCGCCTGGGCGTCCCCGGATCCC

      Eco47III (307)
 301  GCGAGCGCTCGGGCTCCCGGCTTGGAACCAGGGAGGAGGGAGGGAGCGAGGGAGCAACCAGCTGCGACCCGGAAATGCCATATAAGGAGCAGGAAGGATC

                                                                                EagI (460)
 401  CCCCGCCGGAACAACCCTTATTTGGGCAGCACCTTATTTGGAGTGGCCCGATATGGCCCGGCCGCTTCCGGCTCTGGGAGGAGGGAAGAAGGCGGAGGGA

                      BspEI (517)   SandI (530)                SacI (562)                    KasI (583)
 501  GGGGCAACGCGGGAACTCCGGAGCTGCGCGGGTCCCGGAGGCCCCGGCGGCGGCTAGAGCTCTAGGCTTCCCCGAAGCCTGGGCGCCTGGGATGCGGGCG

                AvrII (613)                                                                EagI (680)
 601  CGGGCGCGGGCCCTAGGGTGCAGGATGGAGGTGCCGGGCGCTGTCGGATGGGGGGCTTCACGTCACTCCGGGTCCTCCCGGCCGGTCCTGCCATATTAGG

                          MscI (723)                                                                NruI (795)
 701  GCTTCCTGCTTCCCATATATGGCCATGTACGTCACGACGGAGGCGGACCCGTGCCGTTCCAGACCCTTCAAATAGAGGCGGATCCGGGGAGTCGCGAGAG

                                                                                                    SacII (901)
 801  ATCCCAGCGCGCAGAACTTGGGGAGCCGCCGCCGCCATCCGCCGCCGCAGCCAGCTTCCGCCGCCGCAGGACCGGCCCCTGCCCCAGCCTCCGCAGCCGC

 901  GGCGCGTCCACGCCCGCCCGCGCCCAGGGCGAGTCGGGGTCGCCGCCTGCACGCTTCTCAGTGTTCCCCGCGCCCCGCATGTAACCCGGCCAGGCCCCCG

                PstI (1018)      SmaI (1029)                                        NcoI (1078)
1001  CAACTGTGTCCCCTGCAGCTCCAGCCCCGGGCTGCACCCCCCCGCCCCGACACCAGCTCTCCAGCCTGCTCGTCCACCATGGGGGGTTCTCATCATCATC
                                                                                    1▶MetGlyGlySerHisHisHisH
                      NheI (1116)                                                Acc65I (1172)
1101  ATCATCATGGTATGGCTAGCATGACTGGTGGACAGCAAATGGGTCGGGATCTGTACGACGATGACGATAAGGTACCTAAGGATCAGCTTGGAGTTGATCC

   8▶ isHisHisGlyMetAlaSerMetThrGlyGlyGlnGlnMetGlyArgAspLeuTyrAspAspAspAspLysValProLysAspGlnLeuGlyValAspPr
1201  CGTCGTTTTACAACGTCGTGACTGGGAAAACCCTGGCGTTACCCAACTTAATCGCCTTGCAGCACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAG

  41▶ oValValLeuGlnArgArgAspTrpGluAsnProGlyValThrGlnLeuAsnArgLeuAlaAlaHisProProPheAlaSerTrpArgAsnSerGluGlu
                                    FspI (1332)
1301  GCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCTTTGCCTGGTTTCCGGCACCAGAAGCGGTGCCGGAAAGCTGGCTGG

  75▶ AlaArgThrAspArgProSerGlnGlnLeuArgSerLeuAsnGlyGluTrpArgPheAlaTrpPheProAlaProGluAlaValProGluSerTrpLeuG
1401  AGTGCGATCTTCCTGAGGCCGATACTGTCGTCGTCCCCTCAAACTGGCAGATGCACGGTTACGATGCGCCCATCTACACCAACGTAACCTATCCCATTAC

 108▶ luCysAspLeuProGluAlaAspThrValValValProSerAsnTrpGlnMetHisGlyTyrAspAlaProI leTyrThrAsnValThrTyrProI leTh
1501  GGTCAATCCGCCGTTTGTTCCCACGGAGAATCCGACGGGTTGTTACTCGCTCACATTTAATGTTGATGAAAGCTGGCTACAGGAAGGCCAGACGCGAATT

 141▶ rValAsnProProPheValProThrGluAsnProThrGlyCysTyrSerLeuThrPheAsnValAspGluSerTrpLeuGlnGluGlyGlnThrArgI le
1601  ATTTTTGATGGCGTTAACTCGGCGTTTCATCTGTGGTGCAACGGGCGCTGGGTCGGTTACGGCCAGGACAGTCGTTTGCCGTCTGAATTTGACCTGAGCG

 175▶ I lePheAspGlyValAsnSerAlaPheHisLeuTrpCysAsnGlyArgTrpValGlyTyrGlyGlnAspSerArgLeuProSerGluPheAspLeuSerA
1701  CATTTTTACGCGCCGGAGAAAACCGCCTCGCGGTGATGGTGCTGCGTTGGAGTGACGGCAGTTATCTGGAAGATCAGGATATGTGGCGGATGAGCGGCAT

 208▶ laPheLeuArgAlaGlyGluAsnArgLeuAlaValMetValLeuArgTrpSerAspGlySerTyrLeuGluAspGlnAspMetTrpArgMetSerGlyI l
          AatII (1813)
1801  TTTCCGTGACGTCTCGTTGCTGCATAAACCGACTACACAAATCAGCGATTTCCATGTTGCCACTCGCTTTAATGATGATTTCAGCCGCGCTGTACTGGAG

 241▶ ePheArgAspValSerLeuLeuHisLysProThrThrGlnI leSerAspPheHisValAlaThrArgPheAsnAspAspPheSerArgAlaValLeuGlu
1901  GCTGAAGTTCAGATGTGCGGCGAGTTGCGTGACTACCTACGGGTAACAGTTTCTTTATGGCAGGGTGAAACGCAGGTCGCCAGCGGCACCGCGCCTTTCG

 275▶ AlaGluValGlnMetCysGlyGluLeuArgAspTyrLeuArgValThrValSerLeuTrpGlnGlyGluThrGlnValAlaSerGlyThrAlaProPheG
                ClaI (2014)
2001  GCGGTGAAATTATCGATGAGCGTGGTGGTTATGCCGATCGCGTCACACTACGTCTGAACGTCGAAAACCCGAAACTGTGGAGCGCCGAAATCCCGAATCT

 308▶ lyGlyGluI leI leAspGluArgGlyGlyTyrAlaAspArgValThrLeuArgLeuAsnValGluAsnProLysLeuTrpSerAlaGluI leProAsnLe
2101  CTATCGTGCGGTGGTTGAACTGCACACCGCCGACGGCACGCTGATTGAAGCAGAAGCCTGCGATGTCGGTTTCCGCGAGGTGCGGATTGAAAATGGTCTG

 341▶ uTyrArgAlaValValGluLeuHisThrAlaAspGlyThrLeuI leGluAlaGluAlaCysAspValGlyPheArgGluValArgI leGluAsnGlyLeu
                                                                                                    EcoRV
2201  CTGCTGCTGAACGGCAAGCCGTTGCTGATTCGAGGCGTTAACCGTCACGAGCATCATCCTCTGCATGGTCAGGTCATGGATGAGCAGACGATGGTGCAGG

 375▶ LeuLeuLeuAsnGlyLysProLeuLeuI leArgGlyValAsnArgHisGluHisHisProLeuHisGlyGlnValMetAspGluGlnThrMetValGlnA
```

DraIII (2380)
2301 ATATCCTGCTGATGAAGCAGAACAACTTTAACGCCGTGCGCTGTTCGCATTATCCGAACCATCCGCTGTGGTACACGCTGTGCGACCGCTACGGCCTGTA

408 spI leLeuLeuMetLysGlnAsnAsnPheAsnAlaValArgCysSerHisTyrProAsnHisProLeuTrpTyrThrLeuCysAspArgTyrGlyLeuTy

SspI (2420)
2401 TGTGGTGGATGAAGCCAATATTGAAACCCACGGCATGGTGCCAATGAATCGTCTGACCGATGATCCGCGCTGGCTACCGGCGATGAGCGAACGCGTAACG

441 rValValAspGluAlaAsnI leGluThrHisGlyMetValProMetAsnArgLeuThrAspAspProArgTrpLeuProAlaMetSerGluArgValThr

BsaBI (2516)
2501 CGAATGGTGCAGCGCGATCGTAATCACCCGAGTGTGATCATCTGGTCGCTGGGGAATGAATCAGGCCACGGCGCTAATCACGACGCGCTGTATCGCTGGA

475 ArgMetValGlnArgAspArgAsnHisProSerVal I leI leTrpSerLeuGlyAsnGluSerGlyHisGlyAlaAsnHisAspAlaLeuTyrArgTrpI
2601 TCAAATCTGTCGATCCTTCCCGCCCGGTGCAGTATGAAGGCGGCGGAGCCGACACCACGGCCACCGATATTATTTGCCCGATGTACGCGCGCGTGGATGA

508 leLysSerValAspProSerArgProValGlnTyrGluGlyGlyGlyAlaAspThrThrAlaThrAspI leI leCysProMetTyrAlaArgValAspGl
2701 AGACCAGCCCTTCCCGGCTGTGCCGAAATGGTCCATCAAAAAATGGCTTTCGCTACCTGGAGAGACGCGCCCGCTGATCCTTTGCGAATACGCCCACGCG

541 uAspGlnProPheProAlaValProLysTrpSerI leLysLysTrpLeuSerLeuProGlyGluThrArgProLeuI leLeuCysGluTyrAlaHisAla
2801 ATGGGTAACAGTCTTGGCGGTTTCGCTAAATACTGGCAGGCGTTTCGTCAGTATCCCCGTTTACAGGGCGGCTTCGTCTGGGACTGGGTGGATCAGTCGC

575 MetGlyAsnSerLeuGlyGlyPheAlaLysTyrTrpGlnAlaPheArgGlnTyrProArgLeuGlnGlyGlyPheValTrpAspTrpValAspGlnSerL
2901 TGATTAAATATGATGAAAACGGCAACCCGTGGTCGGCTTACGGCGGTGATTTTGGCGATACGCCGAACGATCGCCAGTTCTGTATGAACGGTCTGGTCTT

608 euI leLysTyrAspGluAsnGlyAsnProTrpSerAlaTyrGlyGlyAspPheGlyAspThrProAsnAspArgGlnPheCysMetAsnGlyLeuValPh

Eco47III (3025)
3001 TGCCGACCGCACGCCGCATCCAGCGCTGACGGAAGCAAAACACCAGCAGCAGTTTTTCCAGTTCCGTTTATCCGGGCAAACCATCGAAGTGACCAGCGAA

641 eAlaAspArgThrProHisProAlaLeuThrGluAlaLysHisGlnGlnGlnPhePheGlnPheArgLeuSerGlyGlnThrI leGluValThrSerGlu

SacI (3130)
3101 TACCTGTTCCGTCATAGCGATAACGAGCTCCTGCACTGGATGGTGGCGCTGGATGGTAAGCCGCTGGCAAGCGGTGAAGTGCCTCTGGATGTCGCTCCAC

675 TyrLeuPheArgHisSerAspAsnGluLeuLeuHisTrpMetValAlaLeuAspGlyLysProLeuAlaSerGlyGluValProLeuAspValAlaProG
3201 AAGGTAAACAGTTGATTGAACTGCCTGAACTACCGCAGCCGGAGAGCGCCGGGCAACTCTGGCTCACAGTACGCGTAGTGCAACCGAACGCGACCGCATG

708 lnGlyLysGlnLeuI leGluLeuProGluLeuProGlnProGluSerAlaGlyGlnLeuTrpLeuThrValArgValValGlnProAsnAlaThrAlaTr
3301 GTCAGAAGCCGGGCACATCAGCGCCTGGCAGCAGTGGCGTCTGGCGGAAAACCTCAGTGTGACGCTCCCCGCCGCGTCCCACGCCATCCCGCATCTGACC

741 pSerGluAlaGlyHisI leSerAlaTrpGlnGlnTrpArgLeuAlaGluAsnLeuSerValThrLeuProAlaAlaSerHisAlaI leProHisLeuThr
3401 ACCAGCGAAATGGATTTTTGCATCGAGCTGGGTAATAAGCGTTGGCAATTTAACCGCCAGTCAGGCTTTCTTTCACAGATGTGGATTGGCGATAAAAAAC

775 ThrSerGluMetAspPheCysI leGluLeuGlyAsnLysArgTrpGlnPheAsnArgGlnSerGlyPheLeuSerGlnMetTrpI leGlyAspLysLysG
3501 AACTGCTGACGCCGCTGCGCGATCAGTTCACCCGTGCACCGCTGGATAACGACATTGGCGTAAGTGAAGCGACCCGCATTGACCCTAACGCCTGGGTCGA

808 lnLeuLeuThrProLeuArgAspGlnPheThrArgAlaProLeuAspAsnAspI leGlyValSerGluAlaThrArgI leAspProAsnAlaTrpValGl
3601 ACGCTGGAAGGCGGCGGGCCATTACCAGGCCGAAGCAGCGTTGTTGCAGTGCACGGCAGATACACTTGCTGATGCGGTGCTGATTACGACCGCTCACGCG

841 uArgTrpLysAlaAlaGlyHisTyrGlnAlaGluAlaAlaLeuLeuGlnCysThrAlaAspThrLeuAlaAspAlaValLeuI leThrThrAlaHisAla
3701 TGGCAGCATCAGGGGAAAACCTTATTTATCAGCCGGAAAACCTACCGGATTGATGGTAGTGGTCAAATGGCGATTACCGTTGATGTTGAAGTGGCGAGCG

875 TrpGlnHisGlnGlyLysThrLeuPheI leSerArgLysThrTyrArgI leAspGlySerGlyGlnMetAlaI leThrValAspValGluValAlaSerA
3801 ATACACCGCATCCGGCGCGGATTGGCCTGAACTGCCAGCTGGCGCAGGTAGCAGAGCGGGTAAACTGGCTCGGATTAGGGCCGCAAGAAAACTATCCCGA

908 spThrProHisProAlaArgI leGlyLeuAsnCysGlnLeuAlaGlnValAlaGluArgValAsnTrpLeuGlyLeuGlyProGlnGluAsnTyrProAs

Bst1107I (3952)
BspLU11I (3949) **BsiWI (3960)**
3901 CCGCCTTACTGCCGCCTGTTTTGACCGCTGGGATCTGCCATTGTCAGACATGTATACCCCGTACGTCTTCCCGAGCGAAAACGGTCTGCGCTGCGGGACG

941 pArgLeuThrAlaAlaCysPheAspArgTrpAspLeuProLeuSerAspMetTyrThrProTyrValPheProSerGluAsnGlyLeuArgCysGlyThr
4001 CGCGAATTGAATTATGGCCCACACCAGTGGCGCGGCGACTTCCAGTTCAACATCAGCCGCTACAGTCAACAGCAACTGATGGAAACCAGCCATCGCCATC

975 ArgGluLeuAsnTyrGlyProHisGlnTrpArgGlyAspPheGlnPheAsnI leSerArgTyrSerGlnGlnGlnLeuMetGluThrSerHisArgHisL

NdeI (4147)
4101 TGCTGCACGCGGAAGAAGGCACATGGCTGAATATCGACGGTTTCCATATGGGGATTGGTGGCGACGACTCCTGGAGCCCGTCAGTATCGGCGGAATTACA

1008 euLeuHisAlaGluGluGlyThrTrpLeuAsnI leAspGlyPheHisMetGlyI leGlyGlyAspAspSerTrpSerProSerValSerAlaGluLeuGl

NheI (4269)
EcoRI (4263)
4201 GCTGAGCGCCGGTCGCTACCATTACCAGTTGGTCTGGTGTCAAAAATAATAATCTAGTCGAGAATTCGCTAGCTCGACATGATAAGATACATTGATGAGT

1041 nLeuSerAlaGlyArgTyrHisTyrGlnLeuValTrpCysGlnLys•••
4301 TTGGACAAACCACAACTAGAATGCAGTGAAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTA

MfeI (4443) DraI (4492)
4401 TTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTCAGGGGGAGGTGTGGGAGGTTTTTTAAAGCA

```
                                   DraI (4531)
                                 SwaI (4534)
4501 AGTAAAACCTCTACAAATGTGGTAGATCCATTTAAATGTTAATTAACTAGCCATGACCAAAATCCCTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGAC

4601 CCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAACCACCGCTACCAGCGGTGGTTTGTT

4701 TGCCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAACTGGCTTCAGCAGAGCGCAGATACCAAATACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCA

4801 CCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTTG

4901 GACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTCGTGCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGA

5001 GATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCAC

5101 GAGGGAGCTTCCAGGGGGAAACGCCTGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGG

                                                                                BspLU11I (5272)
5201 CGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTAATTAAATTTTTCAAAAGTA

          AseI (5310)                                                SfiI (5361)  MscI (5372)
5301 GTTGACAATTAATCATCGGCATAGTATATCGGCATAGTATAATACGACTCACTATAGGAGGGCCATCATGGCCAAGTTGACCAGTGCTGTCCCAGTGCT
                                                                  1 MetAlaLysLeuThrSerAlaValProValLe
5400 CACAGCCAGGGATGTGGCTGGAGCTGTTGAGTTCTGGACTGACAGGTTGGGGTTCTCCAGAGATTTTGTGGAGGATGACTTTGCAGGTGTGGTCAGAGAT
  11 uThrAlaArgAspValAlaGlyAlaValGluPheTrpThrAspArgLeuGlyPheSerArgAspPheValGluAspAspPheAlaGlyValValArgAsp
5500 GATGTCACCCTGTTCATCTCAGCAGTCCAGGACCAGGTGGTGCCTGACAACACCCTGGCTTGGGTGTGGGTGAGAGGACTGGATGAGCTGTATGCTGAGT
  45 AspValThrLeuPheIleSerAlaValGlnAspGlnValValProAspAsnThrLeuAlaTrpValTrpValArgGlyLeuAspGluLeuTyrAlaGluT
5600 GGAGTGAGGTGGTCTCCACCAACTTCAGGGATGCCAGTGGCCCTGCCATGACAGAGATTGGAGAGCAGCCCTGGGGGAGAGAGTTTGCCCTGAGAGACCC
  78 rpSerGluValValSerThrAsnPheArgAspAlaSerGlyProAlaMetThrGluIleGlyGluGlnProTrpGlyArgGluPheAlaLeuArgAspPr
                                DraIII (5722)                                          SfiI (5770)
5700 AGCAGGCAACTGTGTGCACTTTGTGGCAGAGGAGCAGGACTGAGGATAAGAATTGAGTTTCAGAAAAGGGGGCCTGAGTGGCCCCTTTTTTCAACTTAAT
 111 oAlaGlyAsnCysValHisPheValAlaGluGluGlnAsp•••
5800 TAA
```