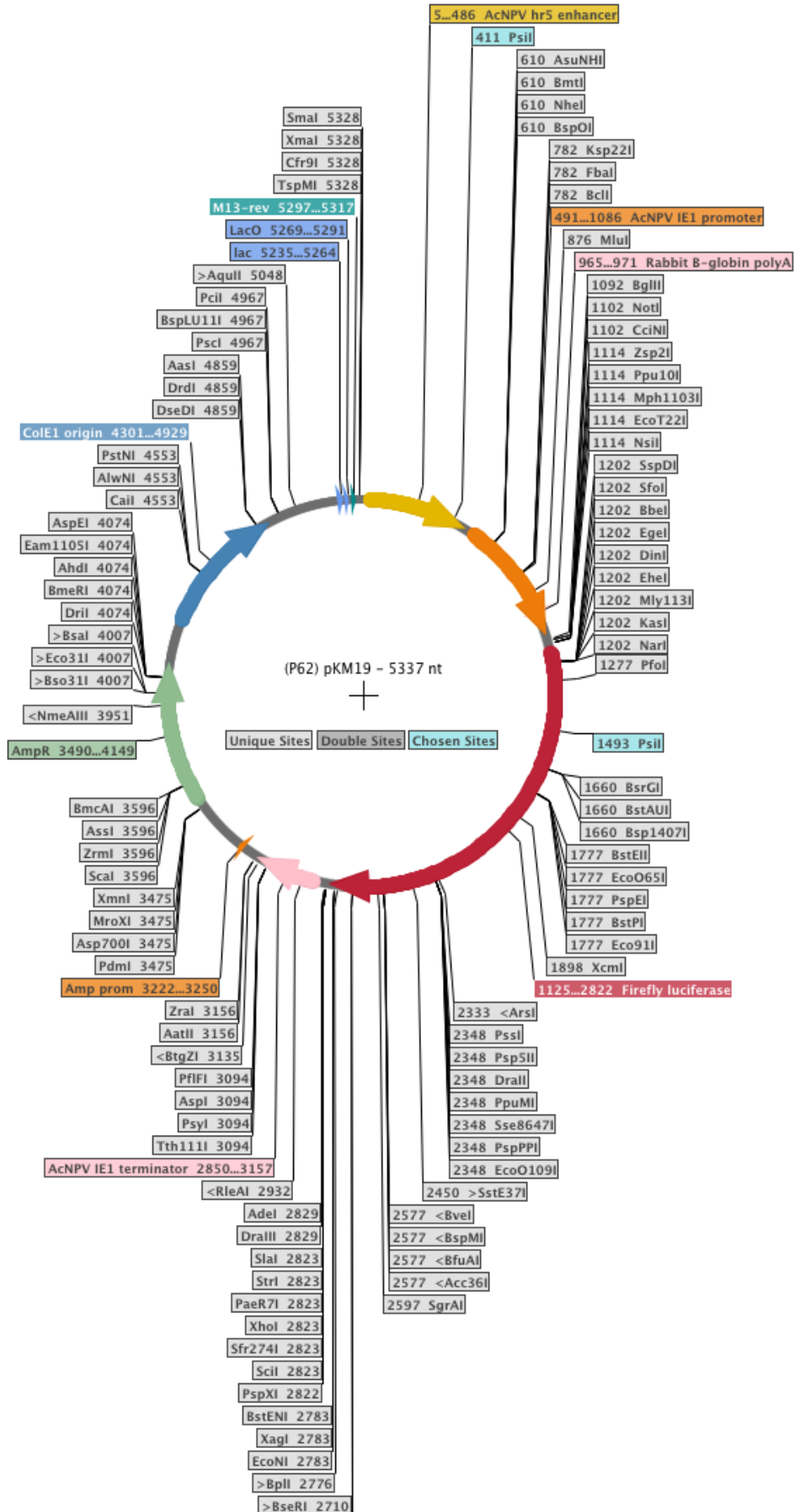


Restriction map of (P62) pKM19 – 5337 nt [using RLibrary as a Restriction Enzyme Library]  
<Serial Cloner V2.5> -- <20 Jan 2014 16:08>



###

ag ctc gcg taa aac aca atc aag tat gag tca taa gct gat gtc atg ttt tgc aca cgg ctc ata acc gaa ctg gct tta cga gta gaa  
 ttc tac ttg ta < 100  
 tc gag cgc att ttg tgt tag ttc ata ctc agt att cga cta cag tac aaa acg tgt gcc gag tat tgg ctt gac cga aat gct cat ctt  
 aag atg aac at  
 10 20 30 40 50 60 70 80  
 90

a cgc acg atc agt gga tga tgt cat ttg ttt ttc aaa tcg aga tga tgt cat gtt ttg cac acg gct cat aaa ctc gct tta cga gta  
 gaa ttc tac gtg < 200  
 t cgc tgc tag tca cct act aca gta aac aaa aag ttt agc tct act aca gta caa aac gtg tgc cga gta ttt gag cga aat gct cat  
 ctt aag atg cac  
 110 120 130 140 150 160 170 180  
 190

>AcNPV hr5 enhancer

taa cgc acg atc gat tga tga gtc att tgt ttt gca ata tga tat cat aca ata tga ctc att tgt ttt tca aaa ccg aac ttg att tac  
 ggg tag aat t < 300  
 att gcg tgc tag cta act act cag taa aca aaa cgt tat act ata gta tgt tat act gag taa aca aaa agt ttt ggc ttg aac taa atg  
 ccc atc tta a  
 210 220 230 240 250 260 270 280  
 290

ct act tgt aaa gca caa tca aaa aga tga tgt cat ttg ttt ttc aaa act gaa ctc gct tta cga gta gaa ttc tac gtg taa aac aca  
 atc aag aaa tg < 400  
 ga tga aca ttt cgt gtt agt ttt tct act aca gta aac aaa aag ttt tga ctt gag cga aat gct cat ctt aag atg cac att ttg tgt  
 tag ttc ttt ac  
 310 320 330 340 350 360 370 380  
 390

a tgt cat ttg tta taa aaa taa aag ctg atg tca tgt ttt gca cat ggc tca taa cta aac tcg ctt tac ggg tag aat tct acg cgc  
 gtc gat gtc ttt < 500  
 t aca gta aac aat att ttt att ttc gac tac agt aca aaa cgt gta ccg agt att gat ttg agc gaa atg ccc atc tta aga tgc gcg  
 cag cta cag aaa  
 410 420 430 440 450 460 470 480  
 490

gtg atg cgc gcg aca ttt ttg tag gtt att gat aaa atg aac gga tac gtt gcc cga cat tat cat taa atc ctt ggc gta gaa ttt gtc  
 ggg tcc att g < 600  
 cac tac gcg cgc tgt aaa aac atc caa taa cta ttt tac ttg cct atg caa ccg gct gta ata gta att tag gaa ccg cat ctt aaa cag  
 ccc agg taa c  
 510 520 530 540 550 560 570 580  
 590

NheI  
 BmtI  
 BspOI  
 AsuNHI

tc cgt gtg cgc tag cat gcc cgt aac gga cct cgt act ttt ggc ttc aaa ggt ttt gcg cac aga caa aat gtg cca cac ttg cag ctc  
 tgc atg tgt gc < 700  
 ag gca cac gcg atc gta ccg gca ttg cct gga gca tga aaa ccg aag ttt cca aaa cgc gtg tct gtt tta cac ggt gtg aac gtc gag  
 acg tac aca cg  
 610 620 630 640 650 660 670 680  
 690

BclI  
 FbaI  
 Ksp22I

>AcNPV IE1 promoter

g cgt tac cac aaa tcc caa ccg cgc agt gta ctt gtt gta tgc aaa taa atc tcg ata aag gcg ccg cgc gcg aat gca gct gat cac  
 gta cgt ccc tcg < 800  
 c gca atg gtg ttt agg gtt gcc gcg tca cat gaa caa cat acg ttt att tag agc tat ttc cgc gcc gcg cgc tta cgt cga cta gtg  
 cat gca ggg agc  
 710 720 730 740 750 760 770 780  
 790

MluI

tgt tcc gtt caa gga ccg tgt tat cga cct cag att aat gtt tat ccg ccg act gtt ttc gta tcc gct cac caa acg cgt ttt tgc att  
 aac att gta t < 900  
 aca agg caa gtt cct gcc aca ata gct gga gtc taa tta caa ata gcc gcc tga caa aag cat agg cga gtg gtt tgc gca aaa acg taa  
 ttg taa cat a  
 810 820 830 840 850 860 870 880  
 890

>Rabbit B-globin polyA

gt cgg ccg atg ttc tat atc taa ttt gaa taa ata aac gat aac cgc gtt ggt ttt aga ggg cat aat aaa aga aat att gtt atc gtg

ttc gcc att ag < 1000  
ca gcc gcc tac aag ata tag att aaa ctt att tat ttg cta ttg gcg caa cca aaa tct ccc gta tta ttt tct tta taa caa tag cac  
aag cgg taa tc  
910 920 930 940 950 960 970 980  
990

**BglII**

|  
g gca gta taa att gac gtt cat gtt gga tat tgt ttc agt tgc aag ttg aca ctg gcg gca aca aga tcg tga aca acc aag tga cCA  
TGG AGA TCT AAT < 1100  
c cgt cat att taa ctg caa gta caa cct ata aca aag tca acg ttc aac tgt gac cgc cgc tgt tct agc act tgt tgg ttc act gGT  
ACC TCT AGA TTA  
1010 1020 1030 1040 1050 1060 1070 1080  
1090

**CciNI**  
**NotI**  
TGC GGC CGC AAT TAT GCA TCA ACC ATG GGA GCT CGA ATT CCA GCT TGG CAT TCC GGT ACT GTT GGT AAA ATG GAA GAC GCC AAA AAC ATA  
AAG AAA GGC C < 1200  
M G A R I P A W H S G T V G K M E D A K N I  
K K G P  
ACG CCG GCG TTA ATA CGT AGT TGG TAC CCT CGA GCT TAA GGT CGA ACC GTA AGG CCA TGA CAA CCA TTT TAC CTT CTG CGG TTT TTG TAT  
TTC TTT CCG G  
1110 1120 1130 1140 1150 1160 1170 1180  
1190

**DinI**  
**SspDI**  
**EgeI**  
**Mly113I**  
**EheI**  
**SfoI**  
**BbeI**  
**NarI**  
**KasI**  
CG GCG CCA TTC TAT CCT CTA GAG GAT GGA ACC GCT GGA GAG CAA CTG CAT AAG GCT ATG AAG AGA TAC GCC CTG GTT CCT GGA ACA ATT  
GCT TTT ACA GA < 1300  
A P F Y P L E D G T A G E Q L H K A M K R Y A L V P G T I  
A F T D  
GC CGC GGT AAG ATA GGA GAT CTC CTA CCT TGG CGA CCT CTC GTT GAC GTA TTC CGA TAC TTC TCT ATG CGG GAC CAA GGA CCT TGT TAA  
CGA AAA TGT CT  
1210 1220 1230 1240 1250 1260 1270 1280  
1290

T GCA CAT ATC GAG GTG AAC ATC ACG TAC GCG GAA TAC TTC GAA ATG TCC GTT CGG TTG GCA GAA GCT ATG AAA CGA TAT GGG CTG AAT  
ACA AAT CAC AGA < 1400  
A H I E V N I T Y A E Y F E M S V R L A E A M K R Y G L N T  
N H R  
A CGT GTA TAG CTC CAC TTG TAG TGC ATG CGC CTT ATG AAG CTT TAC AGG CAA GCC AAC CGT CTT CGA TAC TTT GCT ATA CCC GAC TTA  
TGT TTA GTG TCT  
1310 1320 1330 1340 1350 1360 1370 1380  
1390

ATC GTC GTA TGC AGT GAA AAC TCT CTT CAA TTC TTT ATG CCG GTG TTG GGC GCG TTA TTT ATC GGA GTT GCA GTT GCG CCC GCG AAC GAC  
ATT TAT AAT G < 1500  
I V V C S E N S L Q F F M P V L G A L F I G V A V A P A N D  
I Y N E  
TAG CAG CAT ACG TCA CTT TTG AGA GAA GTT AAG AAA TAC GGC CAC AAC CCG CGC AAT AAA TAG CCT CAA CGT CAA CGC GGG CGC TTG CTG  
TAA ATA TTA C  
1410 1420 1430 1440 1450 1460 1470 1480  
1490

AA CGT GAA TTG CTC AAC AGT ATG AAC ATT TCG CAG CCT ACC GTA GTG TTT GTT TCC AAA AAG GGG TTG CAA AAA ATT TTG AAC GTG CAA  
AAA AAA TTA CC < 1600  
R E L L N S M N I S Q P T V V F V S K K G L Q K I L N V Q  
K K L P  
TT GCA CTT AAC GAG TTG TCA TAC TTG TAA AGC GTC GGA TGG CAT CAC AAA CAA AGG TTT TTC CCC AAC GTT TTT TAA AAC TTG CAC GTT  
TTT TTT AAT GG  
1510 1520 1530 1540 1550 1560 1570 1580  
1590

**BstAUI**  
**BsrGI**  
**Bsp1407I**

A ATA ATC CAG AAA ATT ATT ATC ATG GAT TCT AAA ACG GAT TAC CAG GGA TTT CAG TCG ATG TAC ACG TTC GTC ACA TCT CAT CTA CCT  
CCC GGT TTT AAT < 1700  
I I Q K I I I M D S K T D Y Q G F Q S M Y T F V T S H L P P  
G F N  
T TAT TAG GTC TTT TAA TAA TAG TAC CTA AGA TTT TGC CTA ATG GTC CCT AAA GTC AGC TAC ATG TGC AAG CAG TGT AGA GTA GAT GGA  
GGG CCA AAA TTA  
1610 1620 1630 1640 1650 1660 1670 1680

Eco91I  
Eco065I  
BstEII  
BstPI  
PspEI

GAA TAC GAT TTT GTA CCA GAG TCC TTT GAT CGT GAC AAA ACA ATT GCA CTG ATA ATG AAT TCC TCT GGA TCT ACT GGG TTA CCT AAG GGT  
GTG GCC CTT C < 1800  
E Y D F V P E S F D R D K T I A L I M N S S G S T G L P K G  
V A L P  
CTT ATG CTA AAA CAT GGT CTC AGG AAA CTA GCA CTG TTT TGT TAA CGT GAC TAT TAC TTA AGG AGA CCT AGA TGA CCC AAT GGA TTC CCA  
CAC CGG GAA G  
1710 1720 1730 1740 1750 1760 1770 1780  
1790

XcmI

CG CAT AGA ACT GCC TGC GTC AGA TTC TCG CAT GCC AGA GAT CCT ATT TTT GGC AAT CAA ATC ATT CCG GAT ACT GCG ATT TTA AGT GTT  
GTT CCA TTC CA < 1900  
H R T A C V R F S H A R D P I F G N Q I I P D T A I L S V  
V P F H  
GC GTA TCT TGA CGG ACG CAG TCT AAG AGC GTA CGG TCT CTA GGA TAA AAA CCG TTA GTT TAG TAA GGC CTA TGA CGC TAA AAT TCA CAA  
CAA GGT AAG GT  
1810 1820 1830 1840 1850 1860 1870 1880  
1890

>Firefly luciferase

T CAC GGT TTT GGA ATG TTT ACT ACA CTC GGA TAT TTG ATA TGT GGA TTT CGA GTC GTC TTA ATG TAT AGA TTT GAA GAA GAG CTG TTT  
TTA CGA TCC CTT < 2000  
H G F G M F T T L G Y L I C G F R V V L M Y R F E E E L F L  
R S L  
A GTG CCA AAA CCT TAC AAA TGA TGT GAG CCT ATA AAC TAT ACA CCT AAA GCT CAG CAG AAT TAC ATA TCT AAA CTT CTT CTC GAC AAA  
AAT GCT AGG GAA  
1910 1920 1930 1940 1950 1960 1970 1980  
1990

CAG GAT TAC AAA ATT CAA AGT GCG TTG CTA GTA CCA ACC CTA TTT TCA TTC TTC GCC AAA AGC ACT CTG ATT GAC AAA TAC GAT TTA TCT  
AAT TTA CAC G < 2100  
Q D Y K I Q S A L L V P T L F S F F A K S T L I D K Y D L S  
N L H E  
GTC CTA ATG TTT TAA GTT TCA CGC AAC GAT CAT GGT TGG GAT AAA AGT AAG AAG CGG TTT TCG TGA GAC TAA CTG TTT ATG CTA AAT AGA  
TTA AAT GTG C  
2010 2020 2030 2040 2050 2060 2070 2080  
2090

AA ATT GCT TCT GGG GGC GCA CCT CTT TCG AAA GAA GTC GGG GAA GCG GTT GCA AAA CGC TTC CAT CTT CCA GGG ATA CGA CAA GGA TAT  
GGG CTC ACT GA < 2200  
I A S G G A P L S K E V G E A V A K R F H L P G I R Q G Y  
G L T E  
TT TAA CGA AGA CCC CCG CGT GGA GAA AGC TTT CTT CAG CCC CTT CGC CAA CGT TTT GCG AAG GTA GAA GGT CCC TAT GCT GTT CCT ATA  
CCC GAG TGA CT  
2110 2120 2130 2140 2150 2160 2170 2180  
2190

G ACT ACA TCA GCT ATT CTG ATT ACA CCC GAG GGG GAT GAT AAA CCG GGC GCG GTC GGT AAA GTT GTT CCA TTT TTT GAA GCG AAG GTT  
GTG GAT CTG GAT < 2300  
T T S A I L I T P E G D D K P G A V G K V V P F F E A K V V  
D L D  
C TGA TGT AGT CGA TAA GAC TAA TGT GGG CTC CCC CTA CTA TTT GGC CCG CGC CAG CCA TTT CAA CAA GGT AAA AAA CTT CGC TTC CAA  
CAC CTA GAC CTA  
2210 2220 2230 2240 2250 2260 2270 2280  
2290

PssI  
DraII  
Eco0109I  
Sse8647I  
Psp5II  
PspPPI  
PpuMI

<ArsI

ACC GGG AAA ACG CTG GGC GTT AAT CAG AGA GGC GAA TTA TGT GTC AGA GGA CCT ATG ATT ATG TCC GGT TAT GTA AAC AAT CCG GAA GCG  
ACC AAC GCC T < 2400  
T G K T L G V N Q R G E L C V R G P M I M S G Y V N N P E A  
T N A L  
TGG CCC TTT TGC GAC CCG CAA TTA GTC TCT CCG CTT AAT ACA CAG TCT CCT GGA TAC TAA TAC AGG CCA ATA CAT TTG TTA GGC CTT CGC  
TGG TTG CGG A  
2310 2320 2330 2340 2350 2360 2370 2380  
2390

>SstE37I

TG ATT GAC AAG GAT GGA TGG CTA CAT TCT GGA GAC ATA GCT TAC TGG GAC GAA GAC GAA CAC TTC TTC ATA GTT GAC CGC TTG AAG TCT  
TTA ATT AAA TA < 2500

I D K D G W L H S G D I A Y W D E D E H F F I V D R L K S  
L I K Y  
AC TAA CTG TTC CTA CCT ACC GAT GTA AGA CCT CTG TAT CGA ATG ACC CTG CTT CTG CTT GTG AAG AAG TAT CAA CTG GCG AAC TTC AGA  
AAT TAA TTT AT

2410 2420 2430 2440 2450 2460 2470 2480

<BveI  
<BspMI  
<BfuAI  
<Acc36I

SgrAI

C AAA GGA TAT CAG GTG GCC CCC GCT GAA TTG GAA TCG ATA TTG TTA CAA CAC CCC AAC ATC TTC GAC GCG GGC GTG GCA GGT CTT CCC  
GAC GAT GAC GCC < 2600  
K G Y Q V A P A E L E S I L L Q H P N I F D A G V A G L P D  
D D A  
G TTT CCT ATA GTC CAC CGG GGG CGA CTT AAC CTT AGC TAT AAC AAT GTT GTG GGG TTG TAG AAG CTG CGC CCG CAC CGT CCA GAA GGG  
CTG CTA CTG CGG

2510 2520 2530 2540 2550 2560 2570 2580

GGT GAA CTT CCC GCC GCC GTT GTT GTT TTG GAG CAC GGA AAG ACG ATG ACG GAA AAA GAG ATC GTG GAT TAC GTC GCC AGT CAA GTA ACA  
ACC GCG AAA A < 2700  
G E L P A A V V V L E H G K T M T E K E I V D Y V A S Q V T  
T A K K  
CCA CTT GAA GGG CGG CGG CAA CAA CAA AAC CTC GTG CCT TTC TGC TAC TGC CTT TTT CTC TAG CAC CTA ATG CAG CGG TCA GTT CAT TGT  
TGG CGC TTT T

2610 2620 2630 2640 2650 2660 2670 2680

>BseRI  
>ApuIII

EcoNI  
BstENI  
XagI  
>BplI

AG TTG CGC GGA GGA GTT GTG TTT GTG GAC GAA GTA CCG AAA GGT CTT ACC GGA AAA CTC GAC GCA AGA AAA ATC AGA GAG ATC CTC ATA  
AAG GCC AAG AA < 2800  
L R G G V V F V D E V P K G L T G K L D A R K I R E I L I  
K A K K  
TC AAC GCG CCT CCT CAA CAC AAA CAC CTG CTT CAT GGC TTT CCA GAA TGG CCT TTT GAG CTG CGT TCT TTT TAG TCT CTC TAG GAG TAT  
TTC CGG TTC TT

2710 2720 2730 2740 2750 2760 2770 2780

PaeR7I  
StrI  
SlaI  
Sfr274I  
XhoI  
SciI  
AdeI  
PspXI  
DraIII

G GGC GGA AAG TCC AAA TTG TAA CTC GAg cac taa gtg att aac ctc agg tta tac ata tat ttt gaa ttt aat taa tta tac ata tat  
ttt ata tta ttt < 2900  
G G K S K L \*  
C CCG CCT TTC AGG TTT AAC ATT GAG CTc gtg att cac taa ttg gag tcc aat atg tat ata aaa ctt aaa tta att aat atg tat ata  
aaa tat aat aaa

2810 2820 2830 2840 2850 2860 2870 2880

<RleAI

ttg tct ttt att atc gag ggg cgg ttg ttg gtg tgg ggt ttt gca tag aaa taa caa tgg gag ttg gcg acg ttg ctg cgc caa cac cac  
ctc cct tcc c < 3000  
aac aga aaa taa tag ctc ccc ggc aac aac cac acc cca aaa cgt atc ttt att gtt acc ctc aac cgc tgc aac gac gcg gtt gtg gtg  
gag gga agg g

2910 2920 2930 2940 2950 2960 2970 2980

PflFI

PsyI

AspI

>AcNPV IEl terminator

Tth111I

tc ctt tca tca tgt atc tgt aga taa aat aaa ata tta aac cta aaa aca aga cgc cta tca aca aaa tga tag gca tta act tgc  
cgc tga cgc tg < 3100  
ag gaa agt agt aca tag aca tct att tta ttt tat aat ttg gat ttt tgt tct ggc gcg gat agt tgt ttt act atc cgt aat tga acg  
gcg act gcg ac

3010 3020 3030 3040 3050 3060 3070 3080

<BtgZI

AatII  
ZraI

t cac taa cgt tgg acg att tgc cga cta aac ctt cat cgc cca gta acc aat cta gac gtc agg tgg cac ttt tgc ggg aaa tgt gcg  
cgg aac ccc tat < 3200  
a gtg att gca acc tgc taa acg gct gat ttg gaa gta gcg ggt cat ttg tta gat ctg cag tcc acc gtg aaa agc ccc ttt aca cgc

gcc ttg ggg ata  
3190 3110 3120 3130 3140 3150 3160 3170 3180

ttg ttt att ttt cta aat aca ttc aaa tat gta tcc gct cat gag aca ata acc ctg ata aat gct tca ata ata ttg aaa aag gaa gag  
tat gag tat t < 3300  
aac aaa taa aaa gat tta tgt aag ttt ata cat agg cga gta ctc tgt tat tgg gac tat tta cga agt tat tat aac ttt ttc ctt ctc  
ata ctc ata a  
3290 3210 3220 3230 3240 3250 3260 3270 3280

>Amp prom

ca aca ttt ccg tgt cgc cct tat tcc ctt ttt tgc ggc att ttg cct tcc tgt ttt tgc tca ccc aga aac gct ggt gaa agt aaa aga  
tgc tga aga tc < 3400  
gt tgt aaa ggc aca gcg gga ata agg gaa aaa acg ccg taa aac gga agg aca aaa acg agt ggg tct ttg cga cca ctt tca ttt tct  
acg act tct ag  
3390 3310 3320 3330 3340 3350 3360 3370 3380

PdmI  
Asp700I  
MroXI  
XmnI

a gtt ggg tgc acg agt ggg tta cat cga act gga tct caa cag cgg taa gat cct tga gag ttt tcg ccc cga aga acg ttt tcc aat  
gat gag cac ttt < 3500  
t caa ccc acg tgc tca ccc aat gta gct tga cct aga gtt gtc gcc att cta gga act ctc aaa agc ggg gct tct tgc aaa agg tta  
cta ctc gtg aaa  
3490 3410 3420 3430 3440 3450 3460 3470 3480

ScaI

AssI

ZrmI

BmcAI

taa agt tct gct atg tgg cgc ggt att atc ccg tat tga cgc cgg gca aga gca act cgg tcg ccg cat aca cta ttc tca gaa tga ctt  
ggg tga gta c < 3600  
att tca aga cga tac acc gcg cca taa tag ggc ata act gcg gcc cgt tct cgt tga gcc agc ggc gta tgt gat aag agt ctt act gaa  
cca act cat g  
3590 3510 3520 3530 3540 3550 3560 3570 3580

tc acc agt cac aga aaa gca tct tac gga tgg cat gac agt aag aga att atg cag tgc tgc cat aac cat gag tga taa cac tgc ggc  
caa ctt act tc < 3700  
ag tgg tca gtg tct ttt cgt aga atg cct acc gta ctg tca ttc tct taa tac gtc acg acg gta ttg gta ctc act att gtg acg ccg  
ggt gaa tga ag  
3690 3610 3620 3630 3640 3650 3660 3670 3680

t gac aac gat cgg agg acc gaa gga gct aac cgc ttt ttt gca caa cat ggg gga tca tgt aac tcg cct tga tcg ttg gga acc gga  
gct gaa tga agc < 3800  
a ctg ttg cta gcc tcc tgg ctt cct cga ttg gcg aaa aaa cgt gtt gta ccc cct agt aca ttg agc gga act agc aac cct tgg cct  
cga ctt act tcg  
3790 3710 3720 3730 3740 3750 3760 3770 3780

>AmpR

cat acc aaa cga cga gcg tga cac cac gat gcc tgt agc aat ggc aac aac gtt gcg caa act att aac tgg cga act act tac tct agc  
ttc ccg gca a < 3900  
gta tgg ttt gct gct cgc act gtg gtg cta cgg aca tcg tta ccg ttg ttg caa cgc gtt tga taa ttg acc gct tga tga atg aga tcg  
aag ggc cgt t  
3890 3810 3820 3830 3840 3850 3860 3870 3880

<NmeAIII

ca att aat aga ctg gat gga ggc gga taa agt tgc agg acc act tct gcg ctc ggc cct tcc ggc tgg ctg gtt tat tgc tga taa atc  
tgg agc cgg tg < 4000  
gt taa tta tct gac cta cct ccg cct att tca acg tcc tgg tga aga cgc gag ccg gga agg ccg acc gac caa ata acg act att tag  
acc tcg gcc ac  
3990 3910 3920 3930 3940 3950 3960 3970 3980

>Eco31I  
>Bso31I  
>BsaI

BmeRI  
AspEI  
Eam1105I  
DriI  
AhdI

a gcg tgg gtc tcg cgg tat cat tgc agc act ggg gcc aga tgg taa gcc ctc ccg tat cgt agt tat cta cac gac ggg gag tca ggc  
aac tat gga tga < 4100

t cgc acc cag agc gcc ata gta acg tcg tga ccc cgg tct acc att cgg gag ggc ata gca tca ata gat gtg ctg ccc ctc agt ccg  
ttg ata cct act  
4010 4020 4030 4040 4050 4060 4070 4080  
4090

acg aaa tag aca gat cgc tga gat agg tgc ctc act gat taa gca ttg gta act gtc aga cca agt tta ctc ata tat act tta gat tga  
ttt aaa act t < 4200  
tgc ttt atc tgt cta gcg act cta tcc acg gag tga cta att cgt aac cat tga cag tct ggt tca aat gag tat ata tga aat cta act  
aaa ttt tga a  
4110 4120 4130 4140 4150 4160 4170 4180  
4190

ca ttt tta att taa aag gat cta ggt gaa gat cct ttt tga taa tct cat gac caa aat ccc tta acg tga gtt ttc gtt cca ctg agc  
gtc aga ccc cg < 4300  
gt aaa aat taa att ttc cta gat cca ctt cta gga aaa act att aga gta ctg gtt tta ggg aat tgc act caa aag caa ggt gac tcg  
cag tct ggg gc  
4210 4220 4230 4240 4250 4260 4270 4280  
4290

t aga aaa gat caa agg atc ttc ttg aga tcc ttt ttt tct gcg cgt aat ctg ctg ctt gca aac aaa aaa acc acc gct acc agc ggt  
ggt ttg ttt gcc < 4400  
a tct ttt cta gtt tcc tag aag aac tct agg aaa aaa aga cgc gca tta gac gac gaa cgt ttg ttt ttt tgg tgg cga tgg tcg cca  
cca aac aaa cgg  
4310 4320 4330 4340 4350 4360 4370 4380  
4390

gga tca aga gct acc aac tct ttt tcc gaa ggt aac tgg ctt cag cag agc gca gat acc aaa tac tgt cct tct agt gta gcc gta gtt  
agg cca cca c < 4500  
cct agt tct cga tgg ttg aga aaa agg ctt cca ttg acc gaa gtc gtc tcg cgt cta tgg ttt atg aca gga aga tca cat cgg cat caa  
tcc ggt ggt g  
4410 4420 4430 4440 4450 4460 4470 4480  
4490

CaiI  
PstNI  
AlwNI

tt caa gaa ctc tgt agc acc gcc tac ata cct cgc tct gct aat cct gtt acc agt ggc tgc tgc cag tgg cga taa gtc gtg tct tac  
cgg gtt gga ct < 4600  
aa gtt ctt gag aca tcg tgg cgg atg tat gga gcg aga cga tta gga caa tgg tca ccg acg acg gtc acc gct att cag cac aga atg  
gcc caa cct ga  
4510 4520 4530 4540 4550 4560 4570 4580  
4590

>ColE1 origin

c aag acg ata gtt acc gga taa ggc gca gcg gtc ggg ctg aac ggg ggg ttc gtg cac aca gcc cag ctt gga gcg aac gac cta cac  
cga act gag ata < 4700  
g ttc tgc tat caa tgg cct att ccg cgt cgc cag ccc gac ttg ccc ccc aag cac gtg tgt cgg gtc gaa cct cgc ttg ctg gat gtg  
gct tga ctc tat  
4610 4620 4630 4640 4650 4660 4670 4680  
4690

cct aca gcg tga gct atg aga aag cgc cac gct tcc cga agg gag aaa ggc gga cag gta tcc ggt aag cgg cag ggt cgg aac agg aga  
cgg cac gag g < 4800  
gga tgt cgc act cga tac tct ttc gcg gtg cga agg gct tcc ctc ttt ccg cct gtc cat agg cca ttc gcc gtc cca gcc ttg tcc tct  
cgc gtg ctc c  
4710 4720 4730 4740 4750 4760 4770 4780  
4790

DrdI  
DseDI  
AasI

ga gct tcc agg ggg aaa cgc ctg gta tct tta tag tcc tgt cgg gtt tcg cca cct ctg act tga gcg tcg att ttt gtg atg ctc gtc  
agg ggg gcg ga < 4900  
ct cga agg tcc ccc ttt gcg gac cat aga aat atc agg aca gcc caa agc ggt gga gac tga act cgc agc taa aaa cac tac gag cag  
tcc ccc cgc ct  
4810 4820 4830 4840 4850 4860 4870 4880  
4890

PciI  
PscI  
BspLU11I

g cct atg gaa aaa cgc cag caa cgc ggc ctt ttt acg gtt cct ggc ctt ttg ctg gcc ttt tgc tca cat gtt ctt tcc tgc gtt atc  
ccc tga ttc tgt < 5000  
c gga tac ctt ttt gcg gtc gtt gcg ccc gaa aaa tgc caa gga ccg gaa aac gac cgg aaa acg agt gta caa gaa agg acg caa tag  
ggg act aag aca  
4910 4920 4930 4940 4950 4960 4970 4980  
4990

>AquII

gga taa ccg tat tac cgc ctt tga gtg agc tga tac cgc tcg ccg cag ccg aac gac cga gcg cag cga gtc agt gag cga gga agc gga

```

aga gcg ccc a < 5100
cct att ggc ata atg gcg gaa act cac tcg act atg gcg agc ggc gtc ggc ttg ctg gct cgc gtc gct cag tca ctc gct cct tcg cct
tct cgc ggg t
5010          5020          5030          5040          5050          5060          5070          5080
5090

```

```

at acg caa acc gcc tct ccc cgc gcg ttg gcc gat tca tta atg cag ctg gca cga cag gtt tcc cga ctg gaa agc ggg cag tga gcg
caa cgc aat ta < 5200
ta tgc gtt tgg cgg aga ggg gcg cgc aac cgg cta agt aat tac gtc gac cgt gct gtc caa agg gct gac ctt tcg ccc gtc act cgc
ggt gcg tta at
5110          5120          5130          5140          5150          5160          5170          5180
5190

```

```

a tgt gag tta gct cac tca tta ggc acc cca ggc ttt aca ctt tat gct tcc ggc tcg tat gtt gtg tgg aat tgt gag cgg ata aca
att tca cac agg < 5300
t aca ctc aat cga gtg agt aat ccg tgg ggt ccg aaa tgt gaa ata cga agg ccg agc ata caa cac acc tta aca ctc gcc tat tgt
taa agt gtg tcc
5210          5220          5230          5240          5250          5260          5270          5280
5290

```

SmaI  
Cfr9I  
XmaI  
TspMI

```

>M13-rev
aaa cag cta tga cca tga tta cga att ccc ggc cat g < 5337
ttt gtc gat act ggt act aat gct taa ggg ccc gta c
5310          5320          5330

```

```

Features :
M13-rev           : [5297 : 5317 - CW]
ColE1 origin     : [4301 : 4929 - CW]
LacO             : [5269 : 5291 - CW]
AmpR            : [3490 : 4149 - CW]
Amp prom        : [3222 : 3250 - CW]
lac             : [5235 : 5264 - CW]
Rabbit B-globin polyA : [965 : 971 - CW]
AcNPV hr5 enhancer : [5 : 486 - CW]
AcNPV IE1 promoter : [491 : 1086 - CW]
AcNPV IE1 terminator : [2850 : 3157 - CW]
Firefly luciferase : [1125 : 2822 - CW]

```