



```
CDS complement (146..469)
/codon_start=1
/gene="lacZ"
/product="LacZ-alpha fragment of beta-galactosidase"
/note="lacZ-alpha"

/translation="MTMITPSLHACRSTLEDPRVPSSNSLAVVLQRRDWENPGVTQLNR
LAAHPPFASWRNSEEARTDRPSQQLRSLNGEWRLMRYFLLTHLCGISHRIWCTLSTICS
DAA"
primer_bind 379..395
/note="M13 fwd"
/note="common sequencing primer, one of multiple
similar
variants"
misc_feature 396..452
/note="MCS"
/note="pUC19 multiple cloning site"
primer_bind complement (465..481)
/note="M13 rev"
/note="common sequencing primer, one of multiple
similar
variants"
protein_bind 489..505
/bound_moiety="lac repressor encoded by lacI"
/note="lac operator"
/note="The lac repressor binds to the lac operator
to
inhibit transcription in E. coli. This inhibition
can be
relieved by adding lactose or
isopropyl-beta-D-thiogalactopyranoside (IPTG)."
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promoter complement (513..543)
/note="lac promoter"
/note="promoter for the E. coli lac operon"
rep_origin complement (867..1455)
/direction=LEFT
/note="ori"
/note="high-copy-number ColE1/pMB1/pBR322/pUC origin
of
replication"
CDS complement (1626..2486)
/codon_start=1
/gene="bla"
/product="beta-lactamase"
/note="AmpR"
/note="confers resistance to ampicillin,
carbenicillin, and
related antibiotics"

/translation="MSIQHFRVALIPFFAAFLPVFFAHPETLVKVKDAEDQLGARVGYI
ELDLNSGKILESFRPEERFPMMSDFKVLCCGAVLSRIDAGQEQLGRRIHYSQNDLVEYS
```

PVTEKHLTDGMTVRELCSAAITMSDNNTAANLLLTIGGPKELTAF LHNMGDHSVTRLDRW

EP E L N E A I P N D E R D T T M P V A M A T T L R K L L T G E L L T L A S R Q Q L I D W M E A D K V A G P L L R S A

L P A G W F I A D K S G A G E R G S R G I I A A L G P D G K P S R I V V I Y T T G S Q A T M D E R N R Q I A E I G A S

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promoter       complement (2487..2591)  
                /gene="bla"  
                /note="AmpR promoter"
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ORIGIN

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