



LOCUS Exported 3519 bp ds-DNA circular SYN 01-MAR-2013

DEFINITION Parental vector for TOPO(R) TA cloning of long PCR products.

ACCESSION .

VERSION .

KEYWORDS pCR-XL-TOPO

SOURCE synthetic DNA construct

ORGANISM synthetic DNA construct

REFERENCE 1 (bases 1 to 3519)

AUTHORS Invitrogen (Life Technologies)

TITLE Direct Submission

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<http://www.snapgene.com>

FEATURES

	Location/Qualifiers
source	1..3519 /organism="synthetic DNA construct" /lab_host="Escherichia coli" /mol_type="other DNA"
protein_bind	107..128 /bound_moiety="E. coli catabolite activator protein" /note="CAP binding site" /note="CAP binding activates transcription in the presence of cAMP."
promoter	143..173 /note="lac promoter"

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protein_bind    /note="promoter for the E. coli lac operon"
                181..197
                /bound_moiety="lac repressor encoded by lacI"
                /note="lac operator"
                /note="The lac repressor binds to the lac operator
to
can be
                inhibit transcription in E. coli. This inhibition
                relieved by adding lactose or
                isopropyl-beta-D-thiogalactopyranoside (IPTG)."
primer_bind     205..221
                /note="M13 rev"
                /note="common sequencing primer, one of multiple
similar
                variants"
CDS             217..576
                /codon_start=1
                /gene="lacZ (fragment)"
                /product="LacZ-alpha fragment of beta-galactosidase"
                /note="lacZ-alpha"

/translation="MTMITPSYLGDALEYSSYASSLVPSDPLVTAASVLEFALKGEFC
RYPShwrplehasrgpnsPYSESyynslavvlQRRDwENPGVTQLNRLAAHPPFASWRN
SEEARTDRPSQQLRSL"
promoter       complement(407..425)
                /note="T7 promoter"
                /note="promoter for bacteriophage T7 RNA polymerase"
primer_bind    complement(432..448)
                /note="M13 fwd"
                /note="common sequencing primer, one of multiple
similar
                variants"
CDS            586..888
                /codon_start=1
                /gene="ccdB"
                /product="CcdB, a bacterial toxin that poisons DNA
gyrase"
                /note="ccdB"
                /note="Plasmids containing the ccdB gene cannot be
                propagated in standard E. coli strains."

/translation="QFKVYTYKRESRYRLFVDVQSDIIDTPGRRMVIPLASARLLSDKV
SRELYPVVHIGDESWRMMTTDMASVPVSVIGEEVADLSHRENDIKNAINLMFWGI"
CDS            1237..2031
                /codon_start=1
                /gene="aph(3')-II (or nptII)"
                /product="aminoglycoside phosphotransferase from
Tn5"
                /note="NeoR/KanR"
                /note="confers resistance to neomycin, kanamycin,
and G418
                (Geneticin(R))"

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/translation="MIEQDGLHAGSPAAWVERLFGYDWAQQTIGCSDAAVFRLSAQGRP
VLFVKTDLSGALNELQDEAARLSWLATTGVPCA AVL DVVTEAGRDWLLLGEVPGDLLS
SHLAPA EKVSIMADAMRR LHTLDPATCFPDHQAKHRIERARTRMEAGLVDQDDLDEEHQ
GLAPAE L FARLKASMPDGEDLVVTHGDA CLPNIMVENGRFSGFIDCGRLGVADRYQDIA
          LATRDIAEELGG EWADRFLVLYGIAAPDSQRIAFYRLLDEFF"
      CDS          2238..2612
                  /codon_start=1
                  /gene="Sh ble from Streptoalloteichus hindustanus"
                  /product="antibiotic-binding protein"
                  /note="BleoR"
                  /note="confers resistance to bleomycin, phleomycin,
and
                  Zeocin(TM) "

/translation="MAKLTSAVPVLTARDVAGAVEFWTDRLGFSRDFVEDDFAGVVRDD
VTLFISAVQDQVVPDNTLAWVWVRGLDELYAEWSEVVSTNFRDASGPAMTEIGEQPWGR
          EFALRDPAGNCVHFVAEEQD"
      rep_origin  2750..3338
                  /direction=RIGHT
                  /note="ori"
                  /note="high-copy-number Cole1/pMB1/pBR322/pUC origin
of
                  replication"
ORIGIN
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tgcagctggc
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gtgagttagc
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