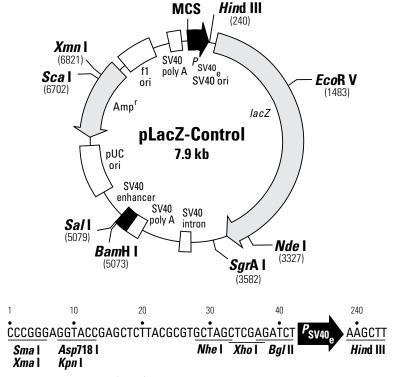
GenBank Accession No. U13186

Cat. No. 631709



Restriction Map and Multiple Cloning Site (MCS) of pLacZ-Control. Unique restriction sites are in bold.

Description

pLacZ-Control is a reporter vector which will express β-galactosidase in mammalian cells. Therefore, this vector can serve as a positive control in experiments that use lacZ as the primary reporter and can also be used to normalize transfection efficiencies in experiments using other reporter molecules. pLacZ-Control contains the SV40 early promoter and enhancer sequences inserted upstream and downstream, respectively, of the lacZ gene. The promoter fragment contains an SV40 origin of replication which is active in cells expressing the SV40 T-antigen. A pUC origin of replication and ampicillin resistance gene allow propagation and selection in E. coli. An f1 origin allows for single-stranded DNA production.

Clontech offers the Beta-Galactosidase Staining Kit (Cat. No. 631780) to determine the efficiency of β-galactosidase transfection and the Luminescent Beta-Galactosidase Reporter System 3 (Cat. No. 631713) to quantify β -galactosidase expression.

Location of features

- Multiple cloning site (MCS): 1-42
- SV40 early promoter

Promoter insert: 38-239

21-bp repeats: 69-89, 90-110 & 112-132

Early promoter element: 145-151; major transcription start points: 141, 179, 185 &190

- SV40 origin of replication: 89-224
- β-galactosidase fusion protein

Start codon (ATG): 286–288; stop codon: 3427–3429

Amino acids from *D. melanogaster* alcohol dehydrogenase: 286–378

Amino acids from *E. coli* β-galactosidase (1): 382–3426

- SV40 small t antigen intron: 4045-4110
- SV40 early mRNA polyadenylation signals: 4716-4721 & 4745-4750 mRNA 3' ends: 4754 & 4766
- SV40 enhancer:

Enhancer insert: 4816-5072

72-bp tandem repeats: 4844-4915 & 4916-4987 21-bp repeats: 4991-5011, 5012-5032 & 5034-5054



Clontech

United States/Canada 800.662.2566 Asia Pacific

+1.650.919.7300

Europe

+33.(0)1.3904.6880

Japan +81.(0)77.543.6116

Clontech Laboratories, Inc. ATakara Bio Company 1290 Terra Bella Ave. Mountain View, CA 94043 Technical Support (US) E-mail: tech@clontech.com www.clontech.com

pLacZ-Control Vector Information

List of features (continued)

• pUC plasmid origin of replication: 5357–6000

Ampicillin resistance (β-lactamase) gene

Promoter: -35 region: 7078-7073; -10 region: 7055-7050

Transcription start point: 7043 Ribosome binding site: 7020–7016

β-lactamase coding sequences: start codon (ATG): 7008–7006; stop codon: 6150–6148 β-lactamase signal peptide: 7008–6940; β-lactamase mature protein: 6939–6151

• f1 single-strand DNA origin (packages the coding strand of the *lacZ* gene): 7140–7595

SV40 early mRNA polyadenylation signals: 7816–7821 & 7845–7850

Propagation in *E. coli*

• Suitable host strains: DH5α and other general purpose strains. Single-stranded DNA production requires a host containing an F' episome such as JM109.

- Selectable marker: plasmid confers resistance to ampicillin (100 µg/ml) to *E. coli* hosts.
- E. coli replication origin: pUC
- Copy number: ~500
- Plasmid incompatibility group: pMB1/Col E1

Reference

1. MacGregor, G. R., et al. (1987) Somat. Cell Mol. Genet. 13: 253-265.

Note: The attached sequence file has been compiled from information in the sequence databases, published literature, and other sources, together with partial sequences obtained by Clontech. This vector has not been completely sequenced.

Notice to Purchaser

Clontech products are to be used for research purposes only. They may not be used for any other purpose, including, but not limited to, use in drugs, in vitro diagnostic purposes, therapeutics, or in humans. Clontech products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products or to provide a service to third parties without written approval of Clontech Laboratories, Inc.

Your use of this product is also subject to compliance with any applicable licensing requirements described on the product's web page at http://www.clontech.com. It is your responsibility to review, understand and adhere to any restrictions imposed by such statements.

Clontech and the Clontech logo are trademarks of Clontech Laboratories, Inc. All other trademarks are the property of their respective owners. Certain trademarks may not be registered in all jurisdictions. Clontech is a Takara Bio Company. ©2012 Clontech Laboratories, Inc.

This document has been reviewed and approved by the Clontech Quality Assurance Department.