Bio Academia
Manufacturer

AS ONE

E. coli LexA Repressor, functional

Cat.# 01-005, Size: 20 µg; Cat.# 01-006, Size: 100 µg

Background:

E. coli LexA protein inhibits the transcription of the genes belonging to the SOS regulon that are related to DNA repair and cell division by recognizing and binding to the SOS-box sequence (TA**CTGT**ATATATAT**ACAG**TA). LexA's self-protease activity is promoted by RecA protein which, responding to DNA damage, is activated by its binding to single-strand DNA accumulated in the cells. It is cleaved into two fragments and loses its function as a repressor. As a result, the expression of genes belonging to the SOS regulon is induced, and DNA repair ability and mutagenic activity in the cells are enhanced (1).

Specifications:

Product: Recombinant full-size LexA protein without tag.

Form: 50% glycerol, 10 mM Tris-HCl (pH 7.5), 2 mM EDTA, 100 mM NaCl, 1 mM DTT

Purity: Over 90% by SDS-PAGE (CBB staining)

Protein concentration: 1.0 mg/ml as measured by BCA method

Storage: Shipped at 4℃ or -20℃ and stored at -20℃ or -80℃ for longer period.

Applications

1. Functional studies on the mechanism of *E. coli* SOS response. This product binds to SOS box in vitro and repress the expression of the genes belonging to SOS regulon.
2. Western Blotting. Used as an antigen for positive control in Western blotting to confirm that the Bait construct is expressed stably in the yeast two-hybrid method using the *lexA* gene. See also antibody to LexA protein (#61-001)
3. Chromatin immuno-precipitation in combination with anti-LexA antibody (#61-001)

Data Link UniProtKB/Swiss-Prot **P0A7C2** (LEXA_ECOL)

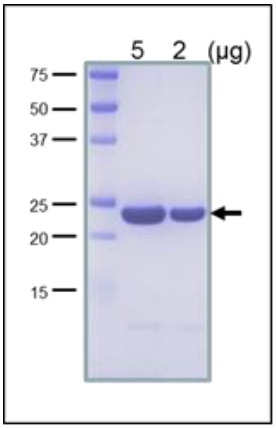

Figure. SDS-PAGE analysis of the purified LexA protein.

References:

1. Waker GC "Understanding the complexity of an organism's responses to DNA damage." 2000) PMID: 12760015
2. Sambrook J & Russell DW Molecular Cloning 3rd Ed. Chapter 18. 17-18.27 Cold Spring Harber Laboratory Press (2001)