

## ***E. coli* LexA Repressor, functional**

01-005 20 µg, 01-006 100 µg

**Storage:** Shipped at 4°C or -20°C and stored at -20°C or -80°C for longer period.

**Product:** Recombinant full-size LexA protein without tag.

### **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) WB. 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)

**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)

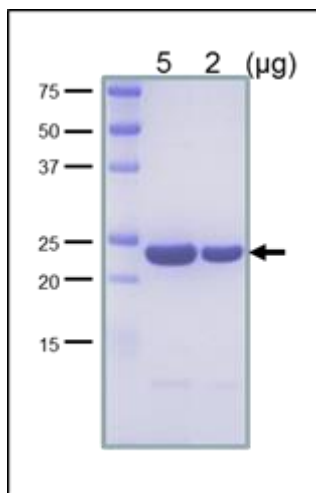
**Protein concentration:** 1.0 mg/ml as measured by BCA method

**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 (TACTGTATATATATACAGTA). 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).

**Data Link** UniProtKB/Swiss-Prot [P0A7C2](#) (LEXA\_ECOLI)

### **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 Harbor Laboratory Press (2001)



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