E. coli LexA Repressor

01-005 20 μg, 01-006 100 μg

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**ATATATATAT**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 the 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).

lexA fused genes are used as baits in the experiments to detect the protein-protein interaction in the yeast two-hybrid method (2).

The product is over-produced as a recombinant protein, and highly purified by several steps of chromatography. A single band is observed by SDS-PAGE at 23 kD (Fig 1).

Usage

1) Studies on the mechanism of *E. coli* SOS response.
2) Used as an antigen for positive control in Western blotting to confirm that the Bait construct is expressed stably in the nucleus as protein of the expected size in the yeast two-hybrid method using the *lexA* gene. See also antibody to LexA protein (#61-001, #61-002)

Specification

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

Protein concentration: 0.8 mg/ml as measured by BCA method

Form: 50% glycerol, 10 mM Tris-HCl (pH 7.5), 2 mM EDTA, 100 mM NaCl, 5 mM mercaptoethanol

Storage: -70℃

Reference:

1. Waker GC, Cold Spring Harb. Symp. Quant. Biol. 65:1-10 (2000)
2. Sambrook J & Russell DW, Molecular Cloning 3rd Ed. Chapter 18.17-18.27 (2001) Cold Spring Harber Laboratory Press

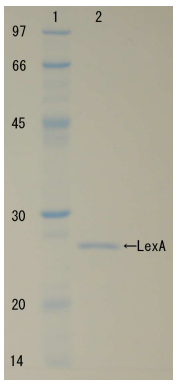

Fig. 1 Polyacrylamide gel electrophoresis of LexA protein.

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