Anti-UmuD antibody, rabbit polyclonal antiserum

61-011　　100ul

The products of ***umuD***, *umuC*, and *recA* genes (SOS genes) are required for mutagenesis induced by radiation or chemical agents. Transcription of these SOS genes is repressed by a repressor, LexA protein in uninduced cells (2). Exposure of cells to DNA-damaging agents activates RecA protein to promote proteolytic cleavage of LexA protein. Inactivation of LexA protein by the cleavage consequently derepresses the SOS genes, ***umuD***, *C* and *recA*. **UmuD** protein is then auto-cleaved, which is promoted by RecA protein ssDNA in a ATP-dependent manner (1). The processed **UmuD** protein is the active form for mutagenesis and the UmuD-UmuC complex functions as a error-prone translesion DNA polymerase (3).

The molecular weight of the intact **UmuD** is 17kD and the proteolytically processed active form is 14KD (1 & Fig.1).

Application

Western blotting (x 3,000 dilution, Fig.1)

Immunogen: Purified recombinant LacZ'-UmuD fusion protein

Form:　antiserum added with 0.05% sodium azide

Storage: 4℃ for short period (about a half year)

For longer period, store at -80℃

Data Link　PMID: 2989817 **(ref.2)**

References: This antibody was used in ref.1.

1. Shinagawa H *et al.* (1988) "RecA protein-dependent cleavage of UmuD protein and SOS mutagenesis." *Proc. Natl. Acad. Sci. USA* **85**: 1806-1810 PMID: 3126496

2. Kitagawa Y. *et al.* (1985) "Structural analysis of the umu operon required for inducible mutagenesis in Escherichia coli." *Proc. Natl. Acad. Sci. USA* **82**: 4336-4340 PMID: 2989817

3. Friedberg EC, et al. DNA Repair and Mutagenesis 2nd ed., ASM Press

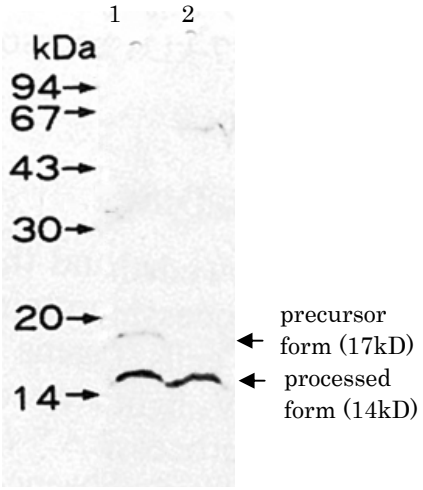

Fig1. Detection of UmuD protein in the extract of *E. coli* DE274 (*lexA51, recA730*) by Western blotting using this antibody.
lane1: without mitomycin C treatment
lane2: treated with mitomycin C

Related Products

01-001 ***E. coli*** **RecA protein**

61-003 **anti-*E. coli* RecA antibody, rabbit polyclonal**

SCETI K.K.
3-6-7 Kasumigaseki, Chiyoda-ku, Tokyo 100-0013, JAPAN
Tel +81(3) 5510-2347　Fax +81(3) 5510-0133
URL: http://www.sceti.jp/export/　e-mail: exp-pet@sceti.co.jp