Anti-E.coli UmuD antibody, rabbit serum

Product code	61-011
Size	100 µl
Storage	Store at 4℃ for short term. For long term storage store at -20℃. Aliquot to avoid repeated freezing thawing.
Concentration	N/A
Buffer	0.05% sodium azide
Purity	Rabbit antiserum
Immunogen	Purified recombinant LacZ'-UmuD fusion protein
Isotype	Rabbit IgG
Reactivity	E.coli UmuD
Special notes	N/A
Application	Western blotting (x 3,000 dilution, Fig.1) Other applications have not been tested.
Background	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 (Ref.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 (Ref.1). The processed **UmuD** protein is the active form for mutagenesis and the UmuD-UmuC complex functions as an error-prone translesion DNA polymerase (Ref.3). The molecular weight of the intact **UmuD** is 17kD and the proteolytically processed active form is 14kD (Ref.1 & Fig.1).
Data Link	UniProtKB P0AG11 (UMUD_ECOLI)

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.

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Data Images: 61-011 Anti-UmuD antibody, rabbit serum

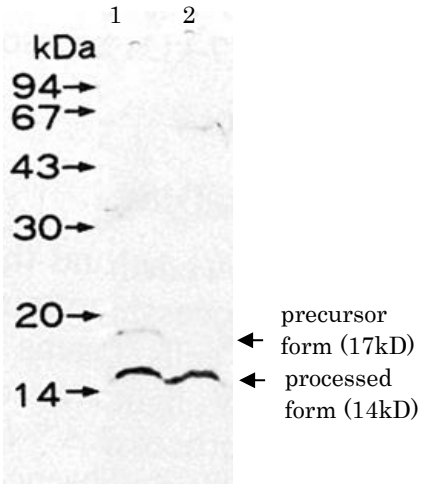

Fig1. Detection of UmuD protein in the extract of E.coli DE274 (lexA51, recA730) by Western blotting using this antibody.

lane1: without mitomycin C treatment

lane2: treated with mitomycin C

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

Related Products:

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

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

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