



POLYCLONAL ANTIBODY

*For research use only. Not for clinical diagnosis.*

**Catalog No. BAM-61-011-EX**

## Anti-UmuD antibody, rabbit polyclonal antiserum

### 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 (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 an 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).

<b>Product type</b>	Primary antibodies
<b>Host</b>	Rabbit
<b>Source</b>	
<b>Form</b>	Liquid antiserum added with 0.05% sodium azide
<b>Volume</b>	100 µl
<b>Concentration</b>	
<b>Specificity</b>	UmuD
<b>Antigen</b>	Purified recombinant LacZ'-UmuD fusion protein
<b>Isotype</b>	

### Application notes

WB

#### Recommended use

#### Recommended dilutions

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

Optimal dilutions/concentrations should be determined by the end user.

Data Link: UniProtKB/Swiss-Prot [P0AG11](#) (UMUD\_ECOLI)

#### Staining Pattern

### Cross reactivity

#### Storage

4°C for short period (about a half year). For longer period, store at -80°C

#### References

- 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

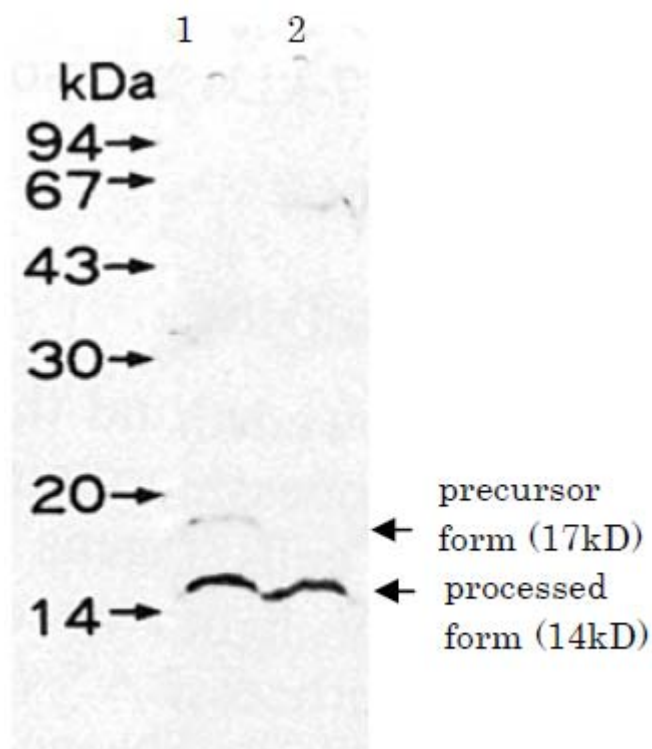


Fig 1. Detection of UmuD protein in the extract of E. coli DE274 (lexA51, recA730) by Western blotting using this antibody.  
lane1: without mitomycin C treatment  
lane2: treated with mitomycin C

**Related Products**

BAM-01-001-EX	E. coli RecA protein
BAM-61-003-EX	anti-E. coli RecA antibody, rabbit polyclonal

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COSMO BIO CO., LTD.  
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TOYO 2CHOME, KOTO-KU, TOKYO, 135-0016, JAPAN

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[Outside Japan] Phone : +81-3-5632-9617 [国内連絡先] Phone : +81-3-5632-9610  
FAX : +81-3-5632-9618 FAX : +81-3-5632-9619