

# Human SUMO 2/3 antibody

Catalog Number: ATGA0547

## PRODUCT INFORMATION

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**Catalog number**

ATGA0547

**Clone No.**

AT10F1

**Product type**

Monoclonal antibody

**UnitProt No.**

P61956

**NCBI Accession No.**

NP\_008868

**Alternative Names**

ubiquitin like protein SMT3B.Small ubiquitin-related modifier 3, SuMO3, SuMO2, SMT3H2, SMT3H1, SMT3B, SMT3A, SMT3 suppressor of mif two 3 homolog 2, SMT3 homolog 2, SMT 3B, Small ubiquitin-related modifier 2 SMT3 suppressor of mif two 3 homolog 2 (*S. cerevisiae*), Small ubiquitin related modifier 2, Small ubiquitin like modifier 2, Sentrin2, MGC117191, HSMT3

**Additional Information**

This product was produced from tissue culture supernatant.

## PRODUCT SPECIFICATION

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**Antibody Host**

Mouse

**Reacts With**

Human

**Concentration**

1mg/ml (determined by BCA assay)

**Formulation**

Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

**Immunogen**

Recombinant human SUMO2 (1-93aa) purified from E.coli

**Isotype**

IgG2b kappa

**Purification Note**

By protein-A affinity chromatography

**Application**

ELISA, WB, ICC/IF, FACS

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## Usage

The antibody has been tested by ELISA, Western blot, ICC/IF and FACS analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

## Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

### Description

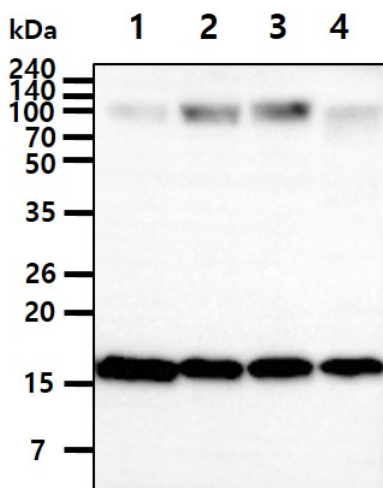
SUMO (small ubiquitin-related modifier) is the best-characterized member of a growing family of ubiquitin-related proteins. 8-11 kDa that covalently modify various intracellular proteins. It resembles ubiquitin in its structure, its ability to be ligated to other proteins. SUMO regulates cellular function of a variety of target proteins. SUMO proteins are expressed as their precursor forms. Cleavage of the residues after the GG region of these precursors by SUMO-specific proteases in maturation is a prerequisite for subsequent sumoylation. Notably, SUMO2 and SUMO3 precursors have 96% sequence identity, and recent studies have shown protein substrates conjugated with SUMO2 or SUMO3 have similar, if not identical, biological consequences.

### General References

Tatsuya Ii, et al. (2007) DNA Repair (Amst), 6(11): 1679-1691.  
Zheng Xu, et al. (2005) Biochem J, 386(Pt 2): 325-330.  
Melchior F. (2000) Annu Rev Cell Dev Biol, 16: 591-626.

## DATA

### Western blot analysis (WB)

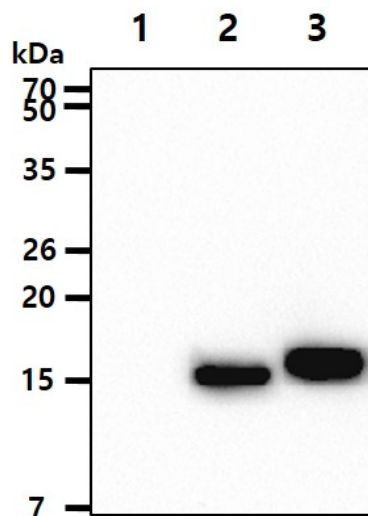


The cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human SUMO/3 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

Lane 1.: HeLa cell lysate  
Lane 2.: Jurkat cell lysate  
Lane 3.: K562 cell lysate  
Lane 4.: HL-60 cell lysate

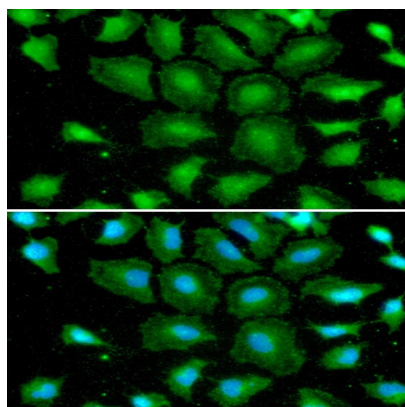
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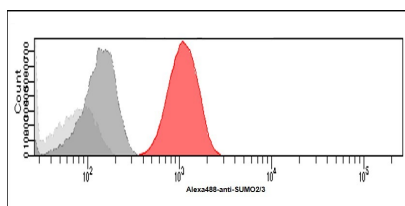
The recombinant proteins (10ng) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human SUMO2/3 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.  
Lane 1.: Recombinant human SUMO1 protein  
Lane 2.: Recombinant human SUMO2 protein  
Lane 3.: Recombinant human SUMO3 protein

### Immunocytochemistry/Immunofluorescence (ICC/IF)



ICC/IF analysis of SUMO2/3 in HeLa cells. The cell was stained with ATGA0547 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).

### Flow cytometry (FACS)



Flow cytometry analysis of SUMO2/3 in Jurkat cells. The cell was stained with ATGA0547 at 2-5ug for  $1 \times 10^6$  cells (red). A Goat anti mouse IgG (Alexa fluor 488) was used as the secondary antibody. Mouse monoclonal IgG was used as the isotype control (dark gray), cells without incubation with primary and secondary antibody was used as the negative control (light gray).