

SUMO-3 ABfinity™ Recombinant Rabbit Monoclonal Antibody - Purified

REF Catalog no. 700186

(See product label for lot information)



Clone/PAD: 1H9L17
Isotype: IgG
Gene ID: 6612
Protein Acc. no.: P55854
Qty: 100 µg
Volume: 200 µl
Concentration: 0.5 mg/ml

Formulation

PBS + 0.09% azide

Immunogen

A peptide corresponding to amino acids 91-103 of P55854.

Immunogen sequence

GGVPESSLAGHSF

Reactivity

This antibody reacts with human, mouse, and rat SUMO-3. Based on sequence identity and similarity, reactivity to chimpanzee and Rhesus monkey is expected.

Storage

2-8°C for up to 1 mo, -20°C for long term storage. Avoid repeated freezing and thawing.



Expiration Date

Expires one year from date of receipt when stored as instructed.

Validated Applications:

	Species	Test Material	Concentration
Western Blotting	mouse, rat	spleen, lung, testes, brain	2-3 µg/ml
Immunohistochemistry	human	colon carcinoma	4-6 µg/ml
Immunofluorescence	human	U2OS	4-6 µg/ml
Flow Cytometry	human	Jurkat	0.5-1 µg/test

Background

Small ubiquitin-related modifier proteins (SUMO-1, SUMO-2 and SUMO-3) are members of the ubiquitin-like protein family (1). SUMO-3 regulates Amyloid β generation and may be critical in the onset or progression of Alzheimer's disease (2). SUMO-2/3 forms poly-(SUMO) chains, which is conjugated to topoisomerase II and APP and regulates chromosomal segregation, progression of Alzheimer's disease and cellular responses to environmental stress (2,3). SUMO-1, 2, and 3 proteins localize to the nuclear membrane, nuclear bodies, and cytoplasm, respectively (4). SUMOylation is essential for mammalian cell cycle regulation, SUMO-2/3 localizes to centromeres and condensed chromosomes where binds CENP-E (5).

References

1. Kim KI, et al. (2002) Versatile protein tag, SUMO: Its enzymology and biological function. *J Cell Physiol* 191: 257-268.
2. Li Y, et al. (2003) Positive and negative regulation of APP amyloidogenesis by sumoylation. *Proc Natl Acad Sci USA* 100: 259-264.
3. Azuma Y, et al. (2003) SUMO-2/3 regulates topoisomerase II in mitosis. *J Cell Biol* 163: 477-487.
4. Spengler ML, et al. (2002) SUMO-1 modification of human cytomegalovirus IE1/IE72. *J Virol* 76: 2990-2996.
5. Zhang, X., et al. (2008) SUMO-2/3 modification and binding regulate the association of CENP-E with kinetochores and progression through mitosis. *Mol. Cell* 29: 729-741.

For research use only. CAUTION: Not intended for human or animal therapeutic or diagnostic use.

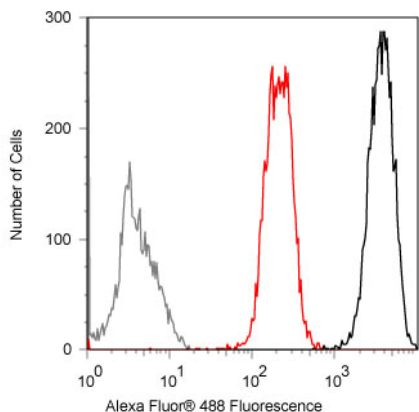
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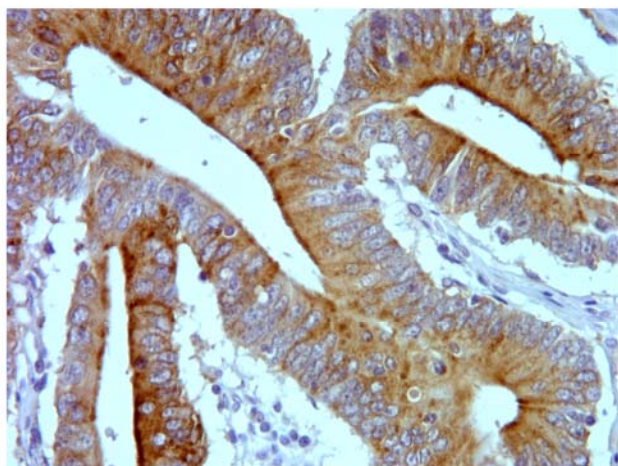
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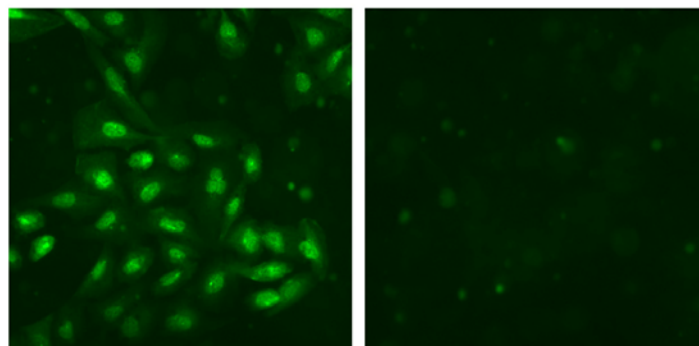
Flow cytometry of Jurkat cells labeled with rabbit anti-SUMO-3 (Cat. No. 700186).

Jurkat cells were fixed and permeabilized using FIX & PERM® (Cat. No. GAS004) reagents. Cells were then stained with (black trace) or without (gray trace) 0.5 µg anti-SUMO-3 followed by Alexa Fluor® 488 goat anti-rabbit Ig (Cat. No. A11008). Pre-incubation with the immunogenic peptide decreased the signal (red trace).



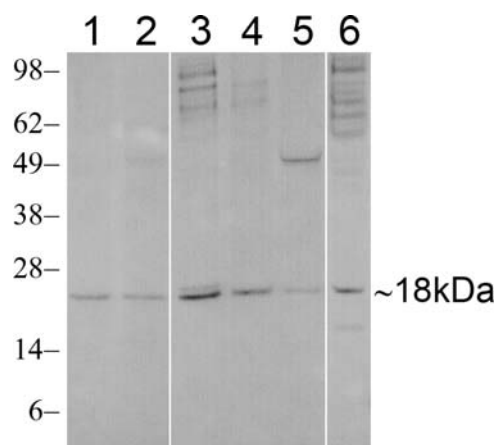
Immunohistochemistry of human colon carcinoma tissue labeled with rabbit anti-SUMO-3 (Cat. No. 700186).

FFPE human colon carcinoma tissue was labeled with rabbit anti-SUMO-3 (5 µg/ml). Tissues were pretreated with EDTA and detected with SuperPicTure™ Polymer DAB (Cat. No. 87-8963). Images were taken at 40x magnification. Note cytoplasmic staining in tumor cells.



Immunocytochemistry of U2OS cells labeled with rabbit anti-SUMO-3 (Cat. No. 700186).

U2OS cells labeled with rabbit anti-SUMO-3 (5.0 µg/ml) (left) and in the presence of phosphopeptide used as immunogen (right). Alexa Fluor® 488 goat anti-rabbit (Cat. No. A11008) at 1:1000 was used as secondary antibody.



Western blot of multiple lysates labeled with rabbit anti-SUMO-3 (Cat. No. 700186).

Rabbit anti-SUMO-3 (2 µg/ml) was used to label SUMO-3 in mouse brain (lane 1), mouse lung (lane 2), mouse testes (lane 3), PC12 cells (lane 4), rat brain (lane 5), and rat testes (lane 6).

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