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SUMO3 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM1201a

Product Information

Application	WB, E
Primary Accession	P55854
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Names	76AT630.91.31
Calculated MW	11637

Additional Information

Gene ID	6612
Other Names	Small ubiquitin-related modifier 3, SUMO-3, SMT3 homolog 1 {ECO:0000312|HGNC:HGNC:11124}, SUMO-2, Ubiquitin-like protein SMT3A, Smt3A, SUMO3 (HGNC:11124)
Target/Specificity	Purified recombinant GST-SUMO3 fusion protein was used as immunogen.
Dilution	WB~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SUMO3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SUMO3 (HGNC:11124)
Function	Ubiquitin-like protein which can be covalently attached to target lysines either as a monomer or as a lysine-linked polymer. Does not seem to be involved in protein degradation and may function as an antagonist of ubiquitin in the degradation process. Plays a role in a number of cellular processes such as nuclear transport, DNA replication and repair, mitosis and signal transduction. Covalent attachment to its substrates requires prior

activation by the E1 complex SAE1-SAE2 and linkage to the E2 enzyme UBE2I, and can be promoted by an E3 ligase such as PIAS1-4, RANBP2 or CBX4 (PubMed:11451954, PubMed:18538659, PubMed:21965678). Plays a role in the regulation of sumoylation status of SETX (PubMed:24105744).

Cellular Location Cytoplasm. Nucleus. Nucleus, PML body

Tissue Location Expressed predominantly in liver.

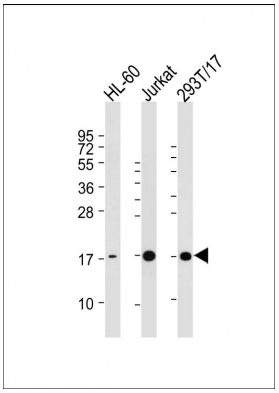
Background

SUMO proteins, such as SUMO3, and ubiquitin (see MIM 191339) posttranslationally modify numerous cellular proteins and affect their metabolism and function. However, unlike ubiquitination, which targets proteins for degradation, sumoylation participates in a number of cellular processes, such as nuclear transport, transcriptional regulation, apoptosis, and protein stability (Su and Li, 2002 [PubMed 12383504]).

References

SENP3-mediated de-conjugation of SUMO2/3 from promyelocytic leukemia is correlated with accelerated cell proliferation under mild oxidative stress. Han Y, et al. J Biol Chem, 2010 Apr 23. PMID 20181954. Association of mitotic regulation pathway polymorphisms with pancreatic cancer risk and outcome. Couch FJ, et al. Cancer Epidemiol Biomarkers Prev, 2010 Jan. PMID 20056645. The p150 subunit of CAF-1 causes association of SUMO2/3 with the DNA replication foci. Uwada J, et al. Biochem Biophys Res Commun, 2010 Jan 1. PMID 19919826. SUMOylation of nuclear actin. Hofmann WA, et al. J Cell Biol, 2009 Jul 27. PMID 19635839. Heat shock protein 27 is involved in SUMO-2/3 modification of heat shock factor 1 and thereby modulates the transcription factor activity. Brunet Simioni M, et al. Oncogene, 2009 Sep 17. PMID 19597476.

Images



All lanes : Anti-SUMO3 Antibody at 1:2000 dilution Lane 1: HL-60 whole cell lysate Lane 2: Jurkat whole cell lysate Lane 3: 293T/17 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 12 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Scc1 sumoylation by Mms21 promotes sister chromatid recombination through counteracting Wapl.

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