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SUMO3 Antibody

Catalog # ASC11131

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	P55854
Other Accession	NP_008867, 48928058
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	11637
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	SUMO3 antibody can be used for detection of SUMO3 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

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	SUMO3;
Reconstitution & Storage	SUMO3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
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.

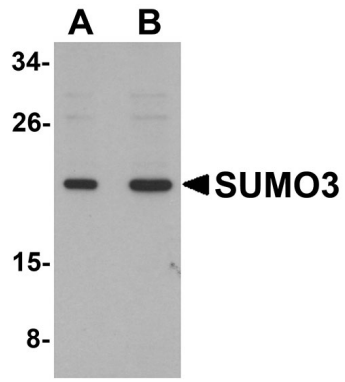
Background

SUMO3 Antibody: Small ubiquitin-like modifiers (SUMOs) are a family of small, related proteins (Sumo-1/2/3/4) that can be enzymatically attached to a target protein by a post-translational modification process termed sumoylation, which is a major regulator of protein function in cellular processes such as nuclear transport, transcriptional regulation, apoptosis and protein stability. All SUMO proteins localize to the nucleus and are covalently conjugated, affecting protein structure, function and interactions. SUMO2 and 3 are 96% identical and are more mobile within nucleus relative to SUMO1. Specific functional differences between SUMO1 and SUMO2 and 3 remain to be identified.

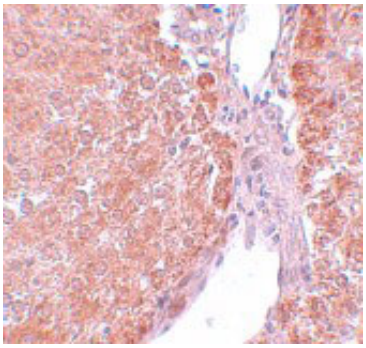
References

Kamitani T, Kito K, Nguyen HP, et al. Characterization of a second member of the sentrin family of ubiquitin-like proteins. J. Biol. Chem.1998;273:11349-53.
Kim KI, Baek SH, and Chung CH. Versatile protein tag, SUMO: its enzymology and biological function. J. Cell. Physiol.2002; 191: 257-68.
Su H and Li SS. Molecular features of human ubiquitin-like SUMO genes and their encoded proteins. Gene2002; 296: 65.
Saitoh H and Hinchey J. Functional heterogeneity of small ubiquitin-related protein modifiers SUMO-1 versus SUMO-2/3. J. Biol. Chem.2000; 275:6252-8.

Images

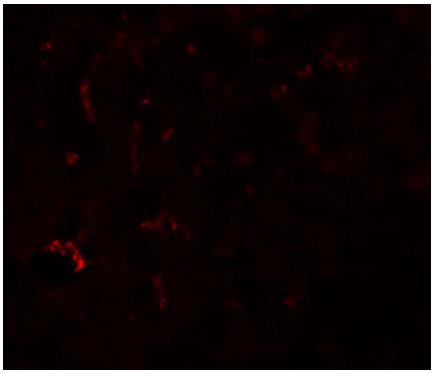


Western blot analysis of SUMO3 in mouse liver tissue lysate with SUMO3 antibody at (A) and (B) 2 µg/mL.



Immunohistochemistry of SUMO2/3 in rat liver tissue with SUMO2/3 antibody at 5 µg/mL.

Immunofluorescence of SUMO3 in mouse liver tissue with SUMO3 antibody at 20 µg/mL.



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