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SUMO2/3 Antibody

Catalog # ASC11130

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	P61956
Other Accession	AAH71645, 47940079
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	10871
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	SUMO2/3 antibody can be used for detection of SUMO2 and 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	6613
Other Names	Small ubiquitin-related modifier 2, SUMO-2, HSMT3, SMT3 homolog 2 {ECO:0000312|HGNC:HGNC:11125}, SUMO-3, Sentrin-2, Ubiquitin-like protein SMT3B, Smt3B, SUMO2 (HGNC:11125)
Target/Specificity	SUMO2;
Reconstitution & Storage	SUMO2/3 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	SUMO2/3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SUMO2 (HGNC:11125)
Function	Ubiquitin-like protein that can be covalently attached to proteins as a monomer or as a lysine-linked polymer. Covalent attachment via an isopeptide bond 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, CBX4 or ZNF451 (PubMed:26524494). This post-translational modification on lysine residues of proteins plays a crucial role in a number of cellular processes such as nuclear transport, DNA

replication and repair, mitosis and signal transduction. Polymeric SUMO2 chains are also susceptible to polyubiquitination which functions as a signal for proteasomal degradation of modified proteins (PubMed:18408734, PubMed:18538659, PubMed:21965678, PubMed:9556629). Plays a role in the regulation of sumoylation status of SETX (PubMed:24105744).

Cellular Location Nucleus. Nucleus, PML body.

Tissue Location Broadly expressed..

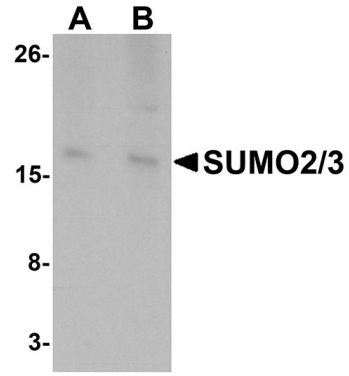
Background

SUMO2/3 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.

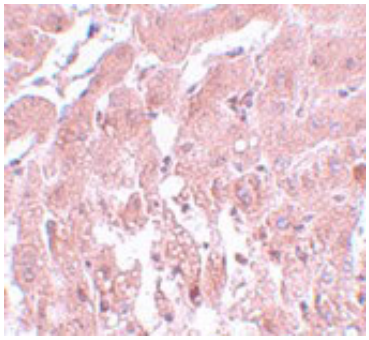
References

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.

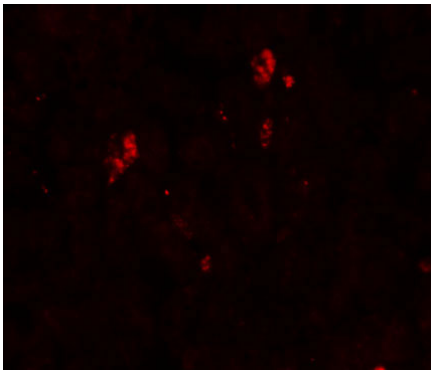
Images



Western blot analysis of SUMO3 in rat 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 SUMO2/3 in rat liver tissue with SUMO2/3 antibody at 20 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.