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SUMO2/3 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1223a

Product Information

Application	WB, E
Primary Accession	P61956
Other Accession	Q6KAQ7, Q8IYH5, Q5SSH7, O43149, A5H447, Q62523, Q15942, Q04584, G5EEM5, Q9GT24, A0JMZ3, Q5TYQ1, P21541, Q3UFS0, Q9C0D3, A2BFL2, Q6WRX3, Q8C8V1, Q2QGD7, P98169, P98168, A2CE44, Q8VIL3, Q9CQU5, O95229, Q2TBH8, Q6IRM9, Q8R060, Q9H900, Q9VA00, A5WWB6, Q95XP9
Reactivity	Human, Rat, Mouse
Predicted	Drosophila, C.Elegans, Bovine, Chicken, Human, Monkey, Mouse, Rat, Rabbit, Xenopus, Zebrafish, Yeast, Pig, Vaccinia Virus, Hamster, Neisseria Gonorrhoeae, SARS
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	10871

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)
Dilution	WB~~1:1000 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	SUMO2/3 Antibody (N-term) 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..

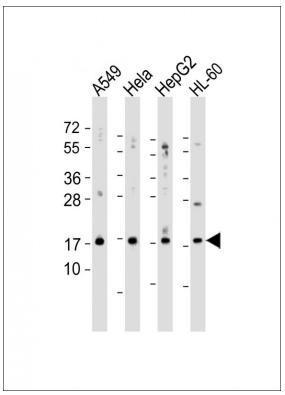
Background

SUMO2 and SUMO3 are members of the SUMO (small ubiquitin-like modifier) protein family. This protein family functions in a manner similar to ubiquitin in that it is bound to target proteins as part of a post-translational modification system. However, unlike ubiquitin which targets proteins for degradation, this protein is involved in a variety of cellular processes, such as nuclear transport, transcriptional regulation, apoptosis, and protein stability. In vertebrates, three members of the SUMO family have been described, SUMO 1 and the functionally distinct homologues SUMO 2 and SUMO 3. SUMO modification sites present in the N terminal regions of SUMO 2 and SUMO 3 are utilized by SAE1/SAE2 (SUMO E1) and Ubc9 (SUMO E2) to form polymeric chains of SUMO 2 and SUMO 3 on protein substrates, a property not shared by SUMO 1.

References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002). Lapenta, V., et al., Genomics 40(2):362-366 (1997). Mannen, H., et al., Biochem. Biophys. Res. Commun. 222(1):178-180 (1996).

Images



All lanes : Anti-SUMO2/3 Antibody (M1) at 1:2000 dilution Lane 1: A549 whole cell lysates Lane 2: Hela whole cell lysates Lane 3: HepG2 whole cell lysates Lane 4: HL-60 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 11 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- The Hydrogen-Coupled Oligopeptide Membrane Cotransporter Pept2 is SUMOylated in Kidney Distal Convoluted Tubule Cells
- Regulation of the Ets-1 transcription factor by sumoylation and ubiquitinylation.