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Pan SUMO Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5018

Product Information

Application	IHC-P, IF, WB
Primary Accession	P55854
Reactivity	Mouse, Rat, Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	11637
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	6612
Antigen Region	Full length
Other Names	SUMO3; SMT3B; SMT3H1; Small ubiquitin-related modifier 3; SMT3 homolog 1; SUMO-2; Ubiquitin-like protein SMT3B
Dilution	IHC-P~~1:100 IF~~1:10~50 WB~~1:1000
Target/Specificity	"This Pan SUMO antibody recognizes SUMO2 and SUMO3. This antibody is generated from rabbits immunized with a recombinant protein encoding full length human SUMO3."
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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	Pan SUMO 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.

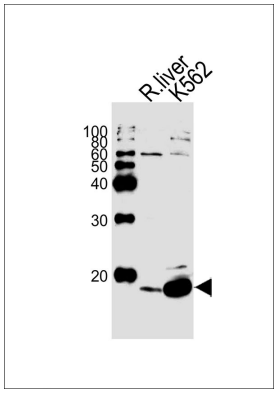
Background

Covalent modification of target lysines by SUMO (small ubiquitin-like modifier) modulates processes such as protein localization, transcription, nuclear transport, mitosis, DNA replication and repair, signal transduction, and viral reproduction. SUMO does not seem to be involved in protein degradation and may in fact function as an antagonist of ubiquitin in the degradation process. The SUMO family consists of SUMO1 and closely related homologs SUMO2, SUMO3, and SUMO4. Sumoylation has been shown to regulate a wide range of proteins, including MDM2, PIAS, PML, RanGAP1, RanBP2, p53, p73, HIPK2, TEL, c-Jun, Fas, Daxx, TNFRI, Topo-I, Topo-II, PARK2, WRN, Sp100, IkB-alpha, Androgen receptor (AR), GLUT1/4, CaMK, DNMT3B, TDG, HIF1A, CHD3, EXOSC9, RAD51, and viral targets such as CMV-IE1/2, EBV-BZLF1, and HPV/BPV-E1.

References

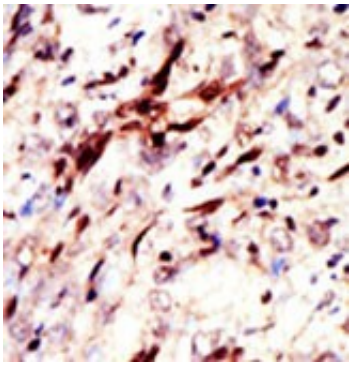
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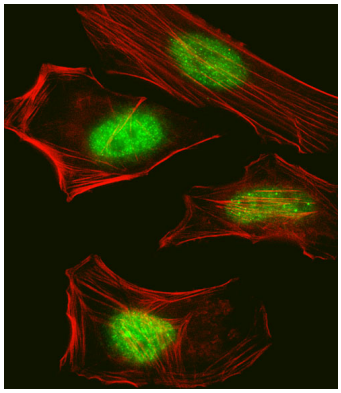
Images



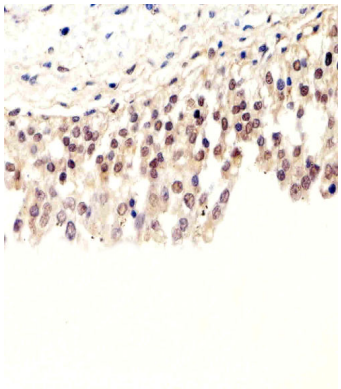
Western blot analysis of lysates from rat liver tissue and K562 cell line (from left to right), using GST Antibody SUMO3(Cat. #AW5018). AW5018 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.





Fluorescent confocal image of Hela cell stained with Pan SUMO Antibody(Cat#AW5018).Hela cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with Pan SUMO primary antibody (1:25, 1 h at 37℃). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37℃).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37℃). Nuclei were counterstained with DAPI (blue) (10 μg/ml, 10 min).Pan SUMO immunoreactivity is localized to Nucleus significantly.



Immunohistochemical analysis of paraffin-embedded H.bladder section using Pan SUMO Antibody(Cat#AW5018). AW5018 was diluted at 1:100 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.

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