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SUMO-2 Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone SUMO2/1199]
Catalog # AH12320

Product Information

Application	IHC, IF, FC
Primary Accession	P55854
Other Accession	6613, 474005
Reactivity	Human, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	SUMO2/1199
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)
Application Note	IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	SUMO-2 Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

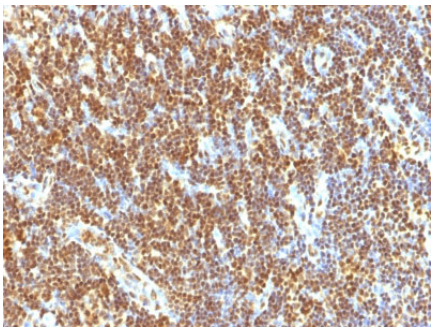
Name	SUMO3 (HGNC:11124)
Function	Ubiquitin-like protein which can be covalently attached to target lysines either as a monomer or as a lysine-linked polymer. Does not seem to be involved in protein degradation and may function as an antagonist of ubiquitin in the degradation process. Plays a role in 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.

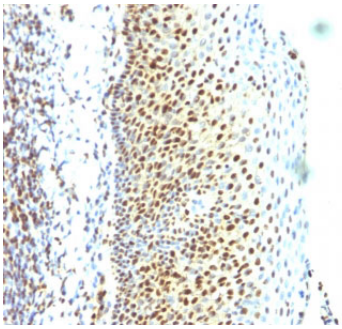
Background

The small ubiquitin-related modifier (SUMO) proteins, which include SUMO-1, 2 and 3, belong to the ubiquitin-like protein family. Like ubiquitin, the SUMO proteins are synthesized as precursor proteins that undergo processing before conjugation to target proteins. Also, both utilize the E1, E2 and E3 cascade enzymes for conjugation. However, SUMO and ubiquitin differ with respect to targeting. Ubiquitination predominantly targets proteins for degradation, whereas sumoylation targets proteins to a variety of cellular processing, including nuclear transport, transcriptional regulation, apoptosis and protein stability. The unconjugated SUMO-1, 2 and 3 proteins localize to the nuclear membrane, nuclear bodies and cytoplasm, respectively. SUMO-1 utilizes Ubc9 for conjugation to several target proteins, which include MDM2, p53, PML and RanGap1. SUMO-2 and 3 contribute to a greater percentage of protein modification than does SUMO-1 and unlike SUMO-1, they can form polymeric chains. In addition, SUMO-3 regulates beta-Amyloid generation and may be critical in the onset or progression of Alzheimer s disease.

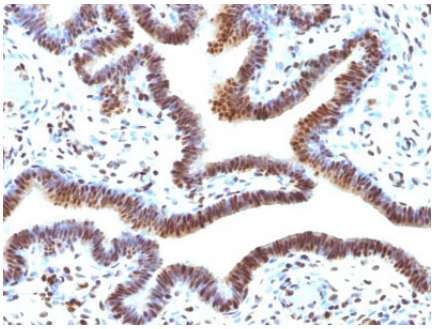
Images



Formalin-fixed, paraffin-embedded human Tonsil stained with SUMO-2 Monoclonal Antibody (SUMO2/1199)

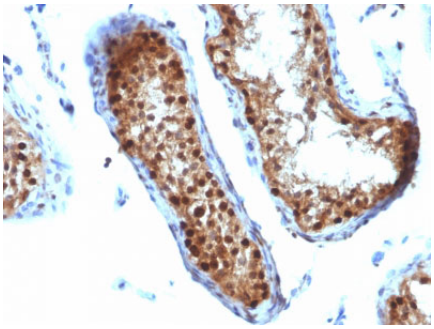


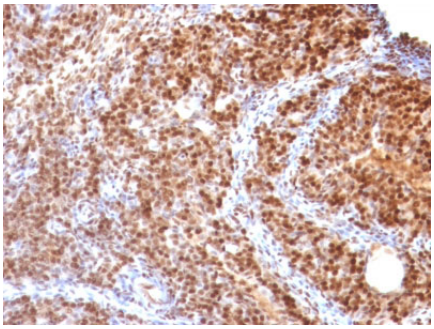
Formalin-fixed, paraffin-embedded human Tonsil stained with SUMO-2 Monoclonal Antibody (SUMO2/1199)



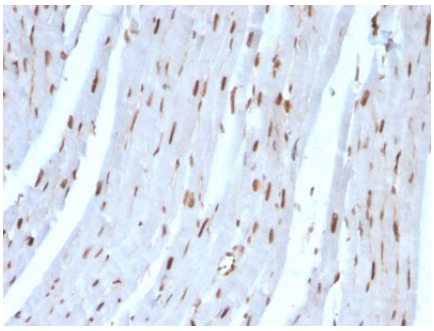
Formalin-fixed, paraffin-embedded human Ovarian Carcinoma stained with SUMO-2 Monoclonal Antibody (SUMO2/1199)

Formalin-fixed, paraffin-embedded human Testicular Carcinoma stained with SUMO-2 Monoclonal Antibody (SUMO2/1199)





Formalin-fixed, paraffin-embedded Rat Ovary stained with SUMO-2 Monoclonal Antibody (SUMO2/1199)



Formalin-fixed, paraffin-embedded Rat Heart stained with SUMO-2 Monoclonal Antibody (SUMO2/1199)