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# SUMO-2 Antibody - With BSA and Azide

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

## Product Information

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|---|---|
| **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

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|---|---|
| **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

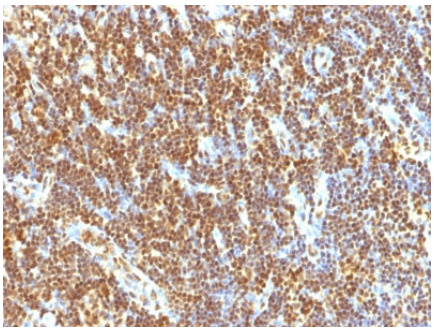
| | |
|---|---|
| **Name** | SUMO3 ( HGNC:11124) |
| **Function** | Ubiquitin-like protein which can be covalently attached to target lysines either as a monomer or as a lysine-linked polymer. Does not seem to be involved in protein degradation and may function as an antagonist of ubiquitin in the degradation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

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| **Tissue Location** | Expressed predominantly in liver. |

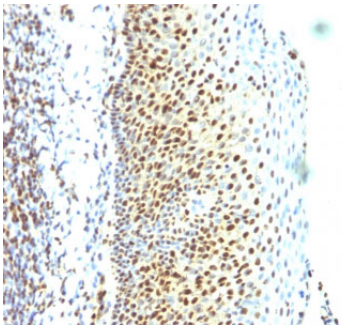
## Background

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.

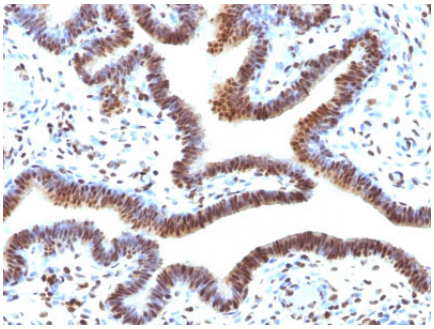
## Images



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

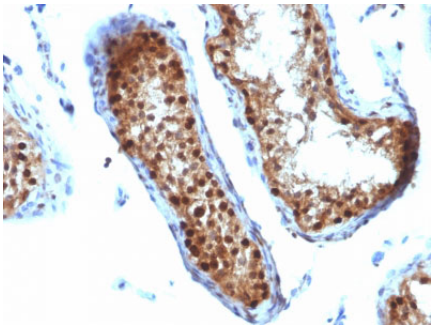


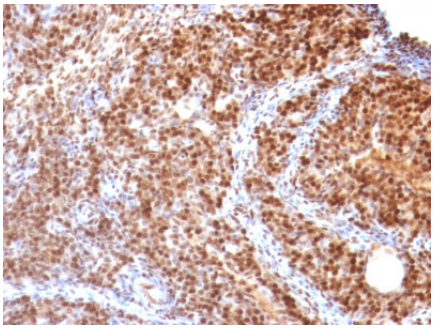
Formalin-fixed, paraffin-embedded human Tonsil stained with SUMO-2 Monoclonal Antibody (SUMO2/1199)



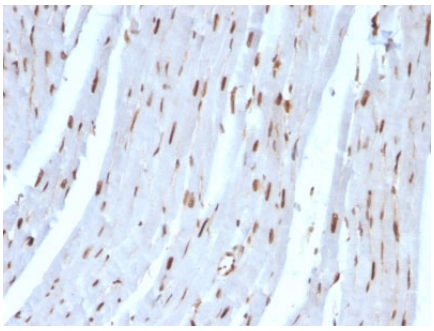
Formalin-fixed, paraffin-embedded human Ovarian Carcinoma stained with SUMO-2 Monoclonal Antibody (SUMO2/1199)

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)

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