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SUMO1 / SMT3 Antibody (aa1-50)

Rabbit Polyclonal Antibody
Catalog # ALS15083

Specification

SUMO1 / SMT3 Antibody (aa1-50) - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	P63165
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**12kDa KDa**
Dilution	**WB~~1:1000** **IHC-P~~N/A** **IF~~1:50~200** **E~~N/A**

SUMO1 / SMT3 Antibody (aa1-50) - Additional Information

Gene ID 7341

Other Names
Small ubiquitin-related modifier 1, SUMO-1, GAP-modifying protein 1, GMP1, SMT3 homolog 3, Sentrin, Ubiquitin-homology domain protein PIC1, Ubiquitin-like protein SMT3C, Smt3C, Ubiquitin-like protein UBL1, SUMO1, SMT3C, SMT3H3, UBL1

Target/Specificity
Sumo1 Antibody detects endogenous levels of total Sumo1 protein.

Reconstitution & Storage
Store at -20°C for up to one year.

Precautions
SUMO1 / SMT3 Antibody (aa1-50) is for research use only and not for use in diagnostic or therapeutic procedures.

SUMO1 / SMT3 Antibody (aa1-50) - Protein Information

Name SUMO1

Synonyms SMT3C, SMT3H3, UBL1

Function
Ubiquitin-like protein that can be covalently attached to proteins as a monomer or 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 E3 ligases such as PIAS1-4, RANBP2 or CBX4. 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. Involved for instance in targeting RANGAP1 to the nuclear pore complex protein RANBP2. Covalently attached to the voltage-gated potassium channel KCNB1; this modulates the gating characteristics of KCNB1 (PubMed:19223394). Polymeric SUMO1 chains are also susceptible to polyubiquitination which functions as a signal for proteasomal degradation of modified proteins. May also regulate a network of genes involved in palate development. Covalently attached to ZFHX3 (PubMed:24651376).

Cellular Location
Nucleus membrane. Nucleus speckle {ECO:0000250|UniProtKB:P63166}. Cytoplasm. Nucleus, PML body. Cell membrane. Nucleus. Note=Recruited by BCL11A into the nuclear body (By similarity). In the presence of ZFHX3, sequesterd to nuclear body (NB)-like dots in the nucleus some of which overlap or closely associate with PML body (PubMed:24651376) {ECO:0000250|UniProtKB:P63166, ECO:0000269|PubMed:24651376}

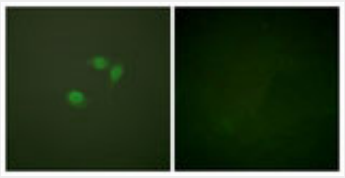
Volume
50 µl

SUMO1 / SMT3 Antibody (aa1-50) - Protocols

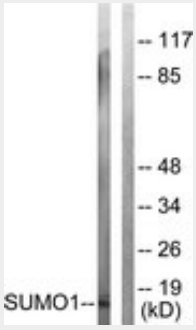
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SUMO1 / SMT3 Antibody (aa1-50) - Images



Immunofluorescence of NIH-3T3 cells, using Sumo1 Antibody.



Western blot of extracts from 293 cells, using Sumo1 Antibody.

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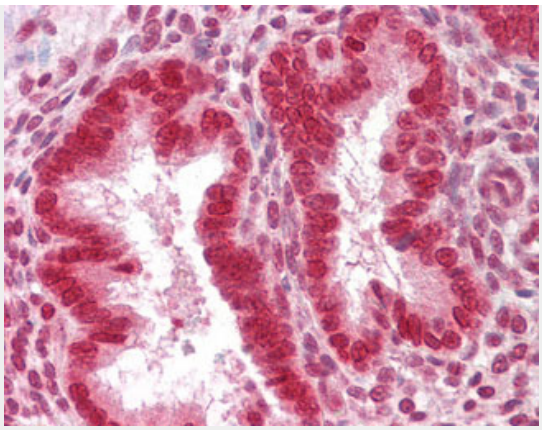

Anti-SUMO1 antibody IHC of human uterus.

SUMO1 / SMT3 Antibody (aa1-50) - Background

Ubiquitin-like protein that can be covalently attached to proteins as a monomer or 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 E3 ligases such as PIAS1-4, RANBP2 or CBX4. 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. Involved for instance in targeting RANGAP1 to the nuclear pore complex protein RANBP2. Polymeric SUMO1 chains are also susceptible to polyubiquitination which functions as a signal for proteasomal degradation of modified proteins. May also regulate a network of genes involved in palate development.

SUMO1 / SMT3 Antibody (aa1-50) - References

Lapenta V.,et al.Genomics 40:362-367(1997).
Boddy M.N.,et al.Oncogene 13:971-982(1996).
Shen Z.,et al.Genomics 36:271-279(1996).
Mahajan R.,et al.Cell 88:97-107(1997).
Matunis M.J.,et al.J. Cell Biol. 135:1457-1470(1996).