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KD-Validated Anti-SUMO1 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI1997

Specification

KD-Validated Anti-SUMO1 Mouse Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	P63165
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**Predicted, 12 kDa, observed, 75 kDa KDa**
Gene Name	**SUMO1**
Aliases	**SUMO1; Small Ubiquitin Like Modifier 1; SMT3H3; SMT3C; GMP1; SUMO-1; OFC10; PIC1; UBL1; Ubiquitin-Homology Domain Protein PIC1; Small Ubiquitin-Related Modifier 1; Ubiquitin-Like Protein SMT3C; Ubiquitin-Like Protein UBL1; SMT3 Homolog 3; Sentrin; SMT3 Suppressor Of Mif Two 3 Homolog 1 (S. Cerevisiae); SMT3 Suppressor Of Mif Two 3 Homolog 1 (Yeast); SMT3 Suppressor Of Mif Two 3 Homolog 1; Ubiquitin-Like 1 (Sentrin); GAP Modifying Protein 1; GAP-Modifying Protein 1; SENP2; Smt3C; DAP1; SMT3**
Immunogen	**Recombinant protein of human SUMO1**

KD-Validated Anti-SUMO1 Mouse Monoclonal Antibody - 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

KD-Validated Anti-SUMO1 Mouse Monoclonal Antibody - 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).

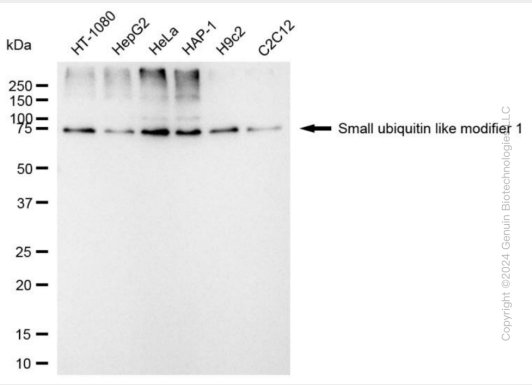
Cellular Location
Nucleus membrane. Nucleus speckle {ECO:0000250|UniProtKB:P63166}. Cytoplasm. Nucleus, PML body. Cell membrane. Nucleus. Note=Recruited by BCL11A into the nuclear body (By similarity). In the presence of ZFHX3, sequesterd to nuclear body (NB)-like dots in the nucleus some of which overlap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

KD-Validated Anti-SUMO1 Mouse Monoclonal Antibody - 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

KD-Validated Anti-SUMO1 Mouse Monoclonal Antibody - Images



Western blotting analysis using anti-small ubiquitin like modifier 1 antibody (Cat#AGI1997). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-small ubiquitin like modifier 1 antibody (Cat#AGI1997, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.

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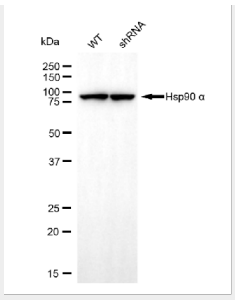
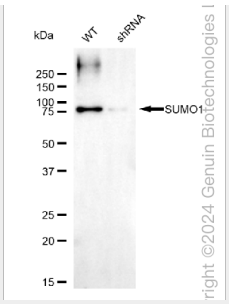
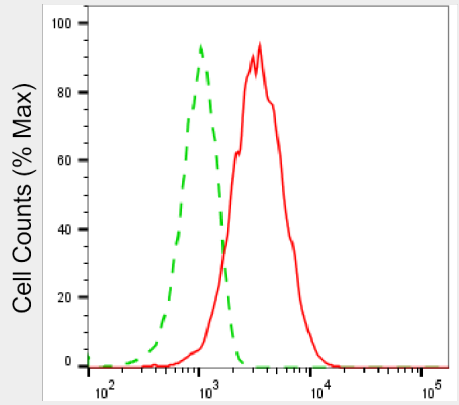




Western blotting analysis using anti-small ubiquitin like modifier 1 antibody (Cat#AGI1997). Small ubiquitin like modifier 1 expression in wild-type (WT) and small ubiquitin like modifier 1 (SUMO1) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-small ubiquitin like modifier 1 antibody (Cat#AGI1997, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Flow cytometric analysis of Small ubiquitin like modifier 1 expression in HAP-1 cells using anti-Small ubiquitin like modifier 1 antibody (Cat#AGI1997, 1:2,000). Green, isotype control; red, Small ubiquitin like modifier 1.