

Datasheet for ABIN129521

**anti-SUMO3 antibody****1** Image[Go to Product page](#)

## Overview

Quantity:	500 µg
Target:	SUMO3
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This SUMO3 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP)

## Product Details

Immunogen:	This purified antibody was prepared from rabbit serum after repeated immunizations with recombinant human SUMO-3 protein. Immunogenotype: Recombinant
Isotype:	IgG
Characteristics:	Concentration Definition: by UV absorbance at 280 nm

## Target Details

Target:	SUMO3
Alternative Name:	SUMO-3 ( <a href="#">SUMO3 Products</a> )
Background:	Covalent modification of cellular proteins by the ubiquitin-like modifier SUMO (small ubiquitin-like modifier) regulates various cellular processes, such as nuclear transport, signal transduction, stress responses and cell cycle progression. But, in contrast to ubiquitination,

## Target Details

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sumoylation does not tag proteins for degradation by the 26S proteasome, but rather seems to enhance stability or modulate their subcellular compartmentalization. Ubiquitin-like proteins fall into two classes: the first class, ubiquitin-like modifiers (UBLs) function as modifiers in a manner analogous to that of ubiquitin. Examples of UBLs are SUMO, Rub1 (also called Nedd8), Apg8 and Apg12. Proteins of the second class include parkin, RAD23 and DSK2, are designated ubiquitin-domain proteins (UDPs). These proteins contain domains that are related to ubiquitin but are otherwise unrelated to each other. In contrast to UBLs, UDPs are not conjugated to other proteins. Once covalently attached to cellular targets, SUMO regulates protein:protein and protein:DNA interactions, as well as localization and stability of the target protein. Sumoylation occurs in most eukaryotic systems, and SUMO is highly conserved from yeast to human.

Where invertebrates have only a single SUMO gene termed SMT3, three members of the SUMO family have been identified in vertebrates: SUMO-1 and the close homologues SUMO-2 and SUMO-3. SUMO has been called SMT3 (yeast), sentrin, PIC1, GMP1 and UBL1. SUMO has been shown to bind and regulate mammalian SP-RINGS (such as Mdm2, PIAS and PML), RanGAP1, RanBP2, p53, p73, HIPK2, TEL, c-Jun, Fas, Daxx, TNFR1, Topo-I, Topo-II, WRN, Sp100, IκB-α, Androgen receptor (AR), GLUT1/4, Drosophila Ttk69, Dorsal, CaMK, yeast Septins, and viral CMV-IE1/2, EBV-BZLF1, HPV/BPV-E1. These bindings implicate SUMO in the stabilization of the target proteins and/or their localization to subcellular complexes. SUMO has an apparent molecular weight of ~12kDa and human SUMO-1 (a 101 amino acid polypeptide) shares 50% sequence identity with SUMO-2 and SUMO-3 and with yeast SMT3. SUMO and ubiquitin only show about 18% homology, but both possess a common three-dimensional structure characterized by a tightly packed globular fold with β-sheets wrapped around an α-helix. Synonyms: Small ubiquitin related modifier 3 antibody, SMT3 homolog 1 antibody, SMT3A antibody, SMT3H1 antibody, SUMO3 antibody, Ubiquitin like protein SMT3A antibody

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Gene ID:	6612, 48928058
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UniProt:	<a href="#">P55854</a>
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## Application Details

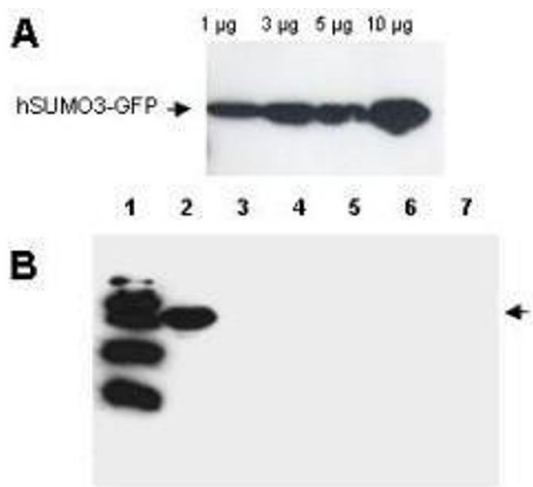
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Application Notes:	This purified polyclonal antibody reacts with human SUMO-3 by western blot and ELISA. Although not tested, this antibody is likely functional in immunohistochemistry and immunoprecipitation. This antibody using the specified conditions may recognize other prominent intrinsic bands (UBLs or conjugates). Other intrinsic bands are readily detectable at lower dilutions. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 11.6 kDa in size corresponding to human SUMO-3 by western blotting in the appropriate cell lysate or extract.
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Application Details

Restrictions:	For Research Use only
Handling	
Format:	Lyophilized
Reconstitution:	Restore with deionized water (or equivalent)
Concentration:	5.0 mg/mL
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C

Images



Western Blotting

**Image 1.** Western blot analysis is shown using Affinity Purified anti-Human SUMO-3 antibody to detect GFP-SUMO fusion proteins (arrowheads). Panel A. Increasing concentrations of human GFP-SUMO-3 were run on a SDS-PAGE, transferred onto nitrocellulose, and blocked for 1 hour with 5% non-fat dry milk in TTBS, and probed overnight at 4°C with a 1:1000 dilution of anti-hSUMO-3 antibody in 5% non-fat dry milk in TTBS. Detection occurred using a 1:1,000 dilution of HRP-labeled Donkey anti-Rabbit IgG for 1 hour at room temperature. A chemiluminescence system was used for signal detection (Roche). Panel B. Specificity of the antibody was confirmed by SDS-PAGE of 5 µg of various GFP-SUMO constructs followed by transfer onto nitrocellulose. Lanes: 1. MW marker, 2. GFP-human SUMO-3, 3. GFP-human SUMO-1, 4. GFP-yeast SUMO, 5. GFP-Arabidopsis thaliana, SUMO-1, 6. GFP- Arabidopsis thaliana SUMO-2, 7. GFP-tomato SUMO. After blocking for 1 hour with 5% non-fat dry milk in TTBS, the blot was probed

overnight at 4°C with anti-hSUMO-3 antibody diluted and detected as above. Only the human GFP-SUMO-3 band was visualized by chemiluminescence, and no crossreactivity with other SUMO family members was observed.