Datasheet for ABIN400792

anti-SUMO1 antibody

2 Images

Go to Product page

Overview

Quantity:	0.1 mg
Target:	SUMO1
Reactivity:	Saccharomyces cerevisiae
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This SUMO1 antibody is un-conjugated
Application:	Western Blotting (WB), Enzyme Immunoassay (EIA)

Product Details

Immunogen:	Recombinant yeast SUMO protein
Clone:	4F2-F5-G2
Isotype:	IgG1
Specificity:	This antibody reacts with yeast SUMO (Smt3).
Characteristics:	Synonyms: UBL1, GMP1, PIC1, Small ubiquitin-related modifier, Ubiquitin-like protein SMT3
Purification:	Affinity chromatography on protein A

Target Details

Target:	SUMO1
Alternative Name:	SMT3 (SUMO1 Products)
Background:	Covalent modification of cellular proteins by the ubiquitin-like modifier SUMO (small ubiquitin-

Target Details

	like modifier) regulates various cellular processes, such as nuclear transport, signal transduction, stress responses and cell cycle progression. However, in contrast to ubiquination, 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, including 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 humans. 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, TNFRI, Topo-I, Topo-II, WRN, Sp100, IkappaB-alpha, 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 ~12 kDa, 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 beta-sheets wrapped around an alpha-helix.Synonyms: SMT-3, Ubiquitin-like protein SMT3
Gene ID:	852122
UniProt:	Q12306
Pathways:	M Phase, Positive Regulation of Endopeptidase Activity, Protein targeting to Nucleus, Ubiquitin Proteasome Pathway

Application Details

Application Notes:	ELISA: 1/20,000. Western blot: 1/2,000. Immunohistochemistry: 1/1,000. Immunoprecipitation. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

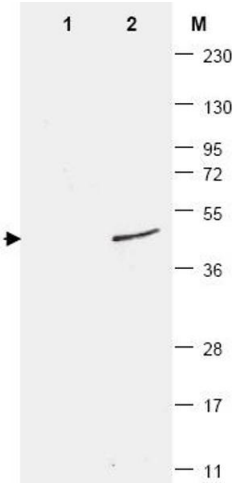
Application Details

Restrictions:	For Research Use only

Handling

Concentration:	1.9 mg/mL (by UV absorbance at 280 nm)
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 containing 0.01 % (w/v) Sodium Azide
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:	-20 °C
Storage Comment:	Store the antibody (in aliqouts) at -20 °C. Avoid repeated freezing and thawing. Shelf life: one year from despatch.
Expiry Date:	12 months

Images



Western Blotting

Image 1.

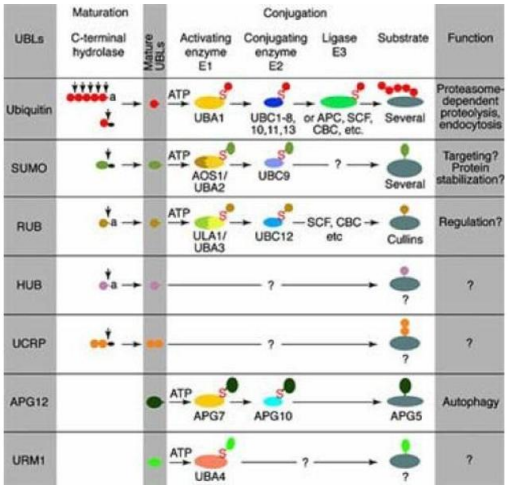


Image 2.

