Datasheet for ABIN233746

anti-SUMO antibody

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Overview

Quantity:	100 µg
Target:	SUMO
Reactivity:	Saccharomyces cerevisiae
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This SUMO antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP)

Product Details

Immunogen:	This antibody was produced in mice by repeated immunizations with full-length recombinant yeast SUMO protein. Immunogentype:Recombinant
Clone:	4F2-F5-G2
Isotype:	IgG
Characteristics:	Concentration Definition: by UV absorbance at 280 nm

Target Details

Target:	SUMO
Abstract:	SUMO Products
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

Target Details

	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 Synonyms: Ubiquitin-like protein SMT3 antibody, SMT3 antibody
Gene ID:	852122, 6320718

Application Details

Application Notes:	This monoclonal antibody reacts with yeast SUMO (Smt3) by western blot and ELISA. Although not tested, this antibody is likely functional in immunohistochemistry and immunoprecipitation. Using the specified conditions, this antibody may recognize other prominent intrinsic bands (UBLs or conjugates). Other intrinsic bands are readily detectable at lower dilutions.
Restrictions:	For Research Use only

Handling

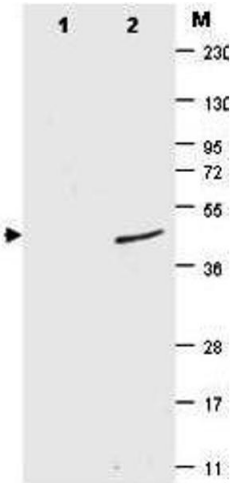
Format:	Liquid
Concentration:	1.9 mg/mL
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C

Publications

Product cited in:

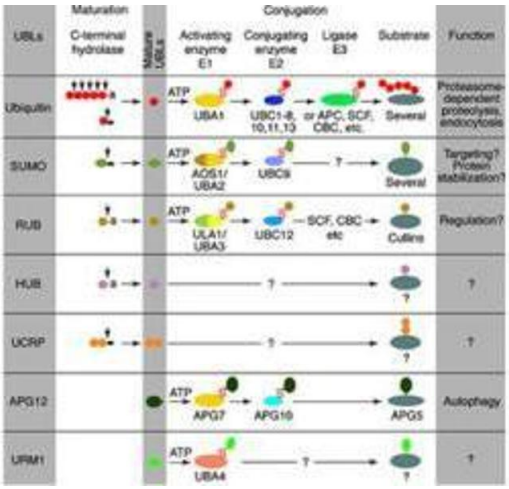
Gates, Zhang, Shambaugh, Bauman, Tan, Bodmer: "Quantitative measurement of varicella-zoster virus infection by semiautomated flow cytometry." in: **Applied and environmental microbiology**, Vol. 75, Issue 7, pp. 2027-36, (2009) (PubMed).

Images



Western Blotting

Image 1. Figure 2: Immunoblot of ySUMO fusion protein. Anti-ySUMO antibody, generated by immunization with recombinant yeast SUMO, was tested by immunoblot against a SUMO-GFP fusion protein (lane 2). While the actual molecular weight of the fusion protein is 39 kDa, the protein migrates as a 49 kDa band (arrowhead). No reactivity is seen for lane 1 which contains His-tagged GFP protein. The membrane was blocked using BLOTTO. Primary antibody was used at a 1:1,000 dilution in BLOTTO. The membrane was washed and reacted with a 1:10,000 dilution of IRDye® 800 Conjugated Affinity Purified Goat-anti-Mouset IgG (H&L) MX10 (800 nm channel). Molecular weight estimation was made by comparison to prestained MW markers indicated at the right (lane M, 700 nm channel). Other detection systems will yield similar results.



Western Blotting

Image 2. Figure 1: Conjugation pathways for ubiquitin and ubiquitin-like modifiers (UBLs). Most modifiers mature by proteolytic processing from inactive precursors (a; amino acid). Arrowheads point to the cleavage sites. Ubiquitin is expressed either as polyubiquitin or as a fusion with ribosomal proteins. Conjugation requires activating (E1) and conjugating (E2) enzymes that form thiolesters (S) with the modifiers. Modification of cullins by RUB involves SCF(SKP1/cullin-1/F-box protein) /CBC(cullin-2/elongin B/elonginC)-like E3 enzymes that are also involved in

ubiquitination. In contrast to ubiquitin, the UBLs do not seem to form multi-UBL chains. UCRP(ISG15) resembles two ubiquitin moieties linked head-to-tail. Whether HUB1 functions as a modifier is currently unclear. APG12 and URM1 are distinct from the other modifiers because they are unrelated in sequence to ubiquitin. Data contributed by S.Jentsch