Datasheet for ABIN129522

anti-ULP1 antibody

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Overview

Quantity:	500 µg
Target:	ULP1
Reactivity:	Saccharomyces cerevisiae
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This ULP1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunoprecipitation (IP), Immunohistochemistry (IHC)

Product Details

Immunogen:	This purified antibody was prepared from rabbit serum after repeated immunizations with recombinant yeast ULP-1 protein. Immunogentype:Recombinant
Isotype:	IgG
Characteristics:	Concentration Definition: by UV absorbance at 280 nm

Target Details

Target:	ULP1
Alternative Name:	ULP1 (ULP1 Products)
Background:	ULP-1, ubiquitin-like protein-specific protease 1, initially processes Smt3 and also acts as a deconjugating enzyme for Smt3 [Saccharomyces cerevisiae (Baker's yeast)]. Covalent modification of cellular proteins by the ubiquitin-like modifier SUMO (small ubiquitin-like

Target Details

	modifier) regulates various cellular processes, such as nuclear transport, signal transduction, stress responses and cell cycle progression. But, 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. 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. Three distinct steps can be distinguished in the SUMO modification pathway: 1) activation of SUMO, 2) transfer of SUMO to the conjugating enzyme, and 3) substrate modification. Since SUMO is synthesized as a precursor protein, a maturation step precedes the activation reaction. In yeast, C-terminal processing of the SUMO precursor is mediated by the processing protease Ulp1, which has an additional role in the deconjugation of SUMO-modified substrates. Mature SUMO is activated by SUMO-activating enzyme, an E_1-like heterodimeric protein complex composed of Uba2 and Aos1. Ulp1 function has provided evidence that SUMO modification in yeast, as has been suspected for vertebrates, plays an important role in nucleocytoplasmic trafficking. Synonyms: Probable sentrin specific protease antibody, Ubiquitin Like Protease antibody
Gene ID:	856087, 6325237
UniProt:	Q02724

Application Details

Application Notes:	This purified polyclonal antibody reacts with yeast ULP-1 by western blot and ELISA. Although not tested, this antibody is likely functional in immunohistochemistry and immunoprecipitation. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 72.4 kDa in size corresponding to yeast ULP-1 by western blotting in the appropriate lysate or extract.
Restrictions:	For Research Use only

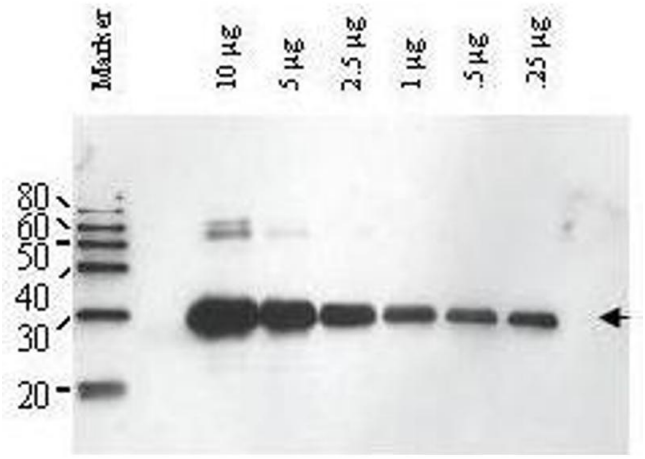
Handling

Format:	Lyophilized
Reconstitution:	Restore with deionized water (or equivalent)
Concentration:	5.0 mg/mL

Handling

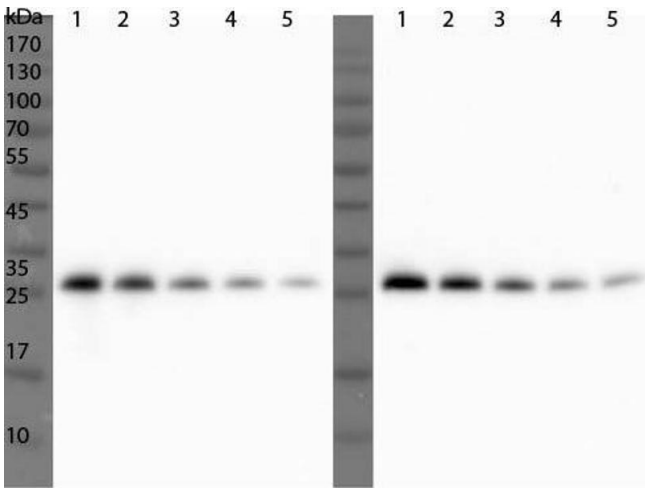
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C

Images



Western Blotting

Image 1. Western blot using Affinity Purified anti-Yeast ULP-1 antibody shows detection of a truncated ULP-1 fusion protein (arrowhead). Increasing concentrations of yeast ULP-1 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-yULP-1 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) using a 3-sec exposure time.



Western Blotting

Image 2. Western Blot of Rabbit Anti-ULP1 Antibody. (in duplicate) Lane 1: 50ng ULP1CD. Lane 2: 25ng ULP1CD. Lane 3: 12.5ng ULP1CD. Lane 4: 6.25ng ULP1CD. Lane 5: 3.13ng ULP1CD. Blocking: 5% BLOTTO in PBST. Primary Antibody: Anti-ULP1 at 1:1000 dilution O/N at 4°C. Secondary Antibody: Goat Anti-Rabbit HRP 1:5000 RT for 30 min.

Western Blotting

Image 3. Western blot using Affinity Purified anti-Yeast ULP-1 antibody was used to confirm the specificity of the antibody. SDS-PAGE of 2 µg of ULP-1 homologues from other sources (lanes 2 through 9). After blocking for 1 hour with 5% non-fat dry milk in TTBS, the blot was probed overnight at 4°C with a 1:1,000 dilution of anti-yULP1 antibody detected as above. This antibody is specific for yeast ULP1 and does not react with ULP1 from related sources including human SENP.

