

Datasheet for 200-401-492**ULP1 Antibody****Overview**

Description:	Anti-ULP1 (RABBIT) Antibody - 200-401-492
Item No.:	200-401-492
Size:	500 µg
Applications:	ELISA, WB
Reactivity:	Yeast
Host Species:	Rabbit

Product Details**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 modifier) regulates various cellular processes, such as nuclear transport, signal transduction, stress responses and cell cycle progression. But, in contrast to ubiquitination, 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 E₁-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:	rabbit anti-ULP1 antibody, rabbit anti-ULP-1 antibody, Probable sentrin specific protease antibody, Ubiquitin Like Protease antibody
Host Species:	Rabbit
Clonality:	Polyclonal

Format: IgG

Target Details

Gene Name:	ULP1
Reactivity:	Yeast
Immunogen Type:	Recombinant Protein
Immunogen:	This purified antibody was prepared from rabbit serum after repeated immunizations with recombinant yeast ULP-1 protein.
Purity/Specificity:	This product is an IgG fraction antibody purified from monospecific antiserum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit Serum. Reactivity against ULP-1 from other sources or ULP-2 has not been determined.
Relevant Links:	• NCBI - 6325237 • UniProtKB - Q02724 • GeneID - 856087

Application Details

Tested Applications:	ELISA, WB
Application Note:	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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:4,000 - 1:20,000
IF:	User Optimized
WB:	1:500 - 1:2,000

Formulation

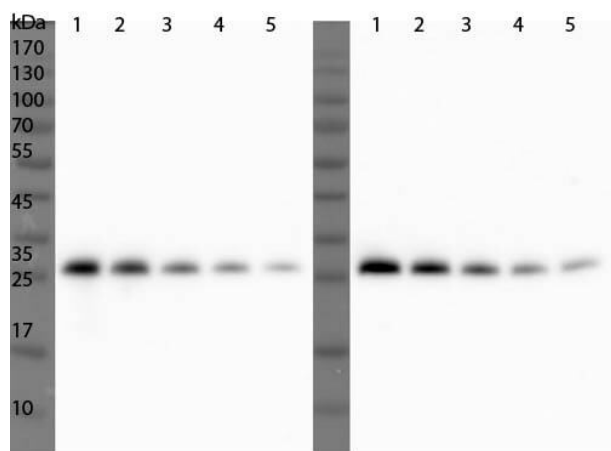
Physical State: Lyophilized

Concentration:	5.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None
Reconstitution Volume:	100 μ L
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

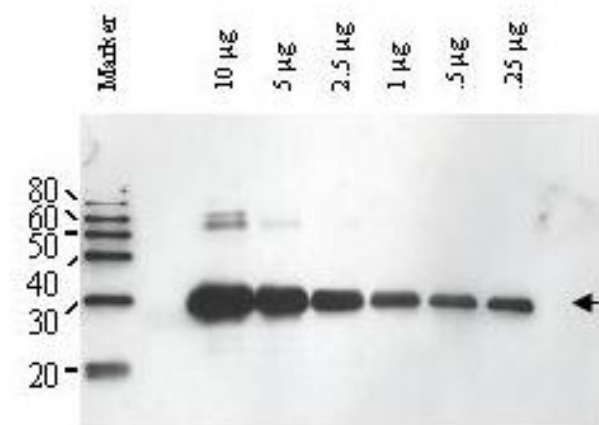
Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



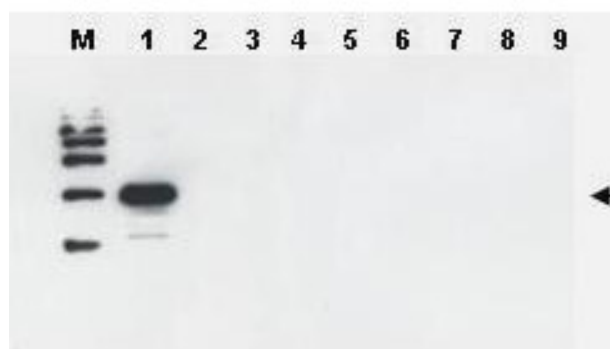
Western Blot

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 Blot

Western blot using Rockland's 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 Blot

Western blot using Rockland's 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.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.