

**Anti-ULP1 (RABBIT) Antibody**  
**ULP1 Antibody**  
**Catalog # ASR4400****Specification**

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**Anti-ULP1 (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Yeast
Reactivity	Yeast
Clonality	Polyclonal
Application	WB, E, I, LCI
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.
Physical State	Lyophilized
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This purified antibody was prepared from rabbit serum after repeated immunizations with recombinant yeast ULP-1 protein.
Reconstitution Volume	100 µL
Reconstitution Buffer	Restore with deionized water (or equivalent)
Preservative	0.01% (w/v) Sodium Azide

**Anti-ULP1 (RABBIT) Antibody - Additional Information****Gene ID** 856087**Other Names**  
856087**Purity**

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.

**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.

#### Precautions Note

This product is for research use only and is not intended for therapeutic or diagnostic applications.

### Anti-ULP1 (RABBIT) Antibody - Protein Information

**Name** ULP1

#### Function

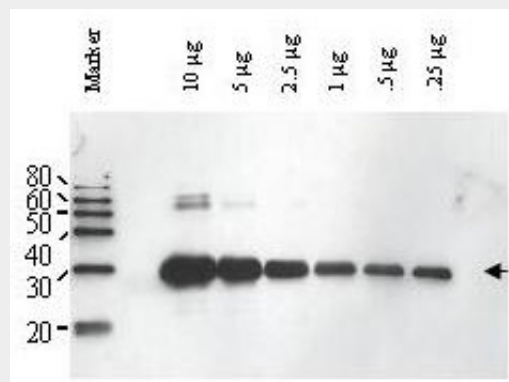
Protease that catalyzes two essential functions in the SUMO pathway: processing of full-length SMT3 to its mature form and deconjugation of SMT3 from targeted proteins. Has an essential role in the G2/M phase of the cell cycle.

### Anti-ULP1 (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-ULP1 (RABBIT) Antibody - Images



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.

### Anti-ULP1 (RABBIT) Antibody - 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.