

**Anti-UBA1 Picoband Antibody**  
Catalog # ABO12590**Specification**

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**Anti-UBA1 Picoband Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P22314</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Ubiquitin-like modifier-activating enzyme 1(UBA1) detection. Tested with WB in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-UBA1 Picoband Antibody - Additional Information**

**Gene ID** 7317

**Other Names**

Ubiquitin-like modifier-activating enzyme 1, 6.2.1.45, Protein A1S9, Ubiquitin-activating enzyme E1, UBA1, A1S9T, UBE1

**Calculated MW**

117849 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat<br>

**Subcellular Localization**

Cytoplasm . Mitochondrion . Nucleus .

**Tissue Specificity**

Detected in erythrocytes (at protein level). Ubiquitous. .

**Protein Name**

Ubiquitin-like modifier-activating enzyme 1

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

**Immunogen**

A synthetic peptide corresponding to a sequence at the N-terminus of human UBA1 (102-139aa HDQGTAQWADLSSQFYLRREEDIGKNRAEVSQPRLAELN), different from the related mouse and rat sequences by one amino acid.

### Purification

Immunogen affinity purified.

### Cross Reactivity

No cross reactivity with other proteins.

### Storage

At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.

## Anti-UBA1 Picoband Antibody - Protein Information

**Name** UBA1

**Synonyms** A1S9T, UBE1

### Function

Catalyzes the first step in ubiquitin conjugation to mark cellular proteins for degradation through the ubiquitin-proteasome system (PubMed:<a href="http://www.uniprot.org/citations/1447181" target="\_blank">1447181</a>, PubMed:<a href="http://www.uniprot.org/citations/1606621" target="\_blank">1606621</a>, PubMed:<a href="http://www.uniprot.org/citations/33108101" target="\_blank">33108101</a>). Activates ubiquitin by first adenylating its C-terminal glycine residue with ATP, and thereafter linking this residue to the side chain of a cysteine residue in E1, yielding a ubiquitin-E1 thioester and free AMP (PubMed:<a href="http://www.uniprot.org/citations/1447181" target="\_blank">1447181</a>). Essential for the formation of radiation-induced foci, timely DNA repair and for response to replication stress. Promotes the recruitment of TP53BP1 and BRCA1 at DNA damage sites (PubMed:<a href="http://www.uniprot.org/citations/22456334" target="\_blank">22456334</a>).

### Cellular Location

Cytoplasm. Mitochondrion. Nucleus [Isoform 2]: Cytoplasm

### Tissue Location

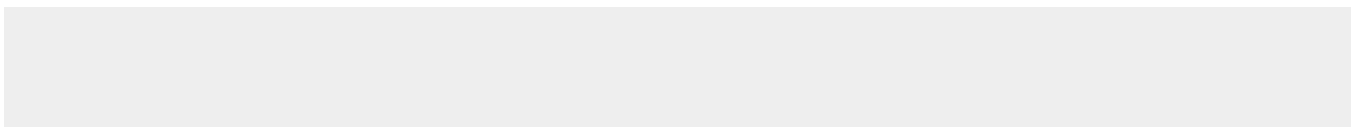
Detected in erythrocytes (at protein level). Ubiquitous.

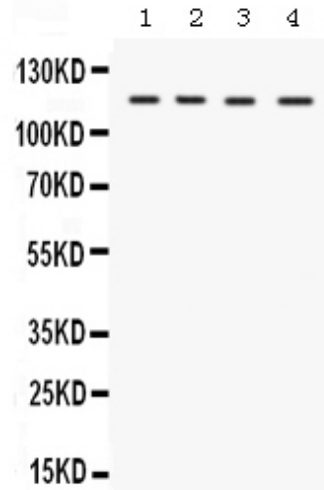
## Anti-UBA1 Picoband Antibody - Protocols

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-UBA1 Picoband Antibody - Images





Western blot analysis of UBA1 expression in rat liver extract (lane 1), mouse liver extract (lane 2), mouse testis extract (lane 3) and HELA whole cell lysates (lane 4). UBA1 at 117KD was detected using rabbit anti- UBA1 Antigen Affinity purified polyclonal antibody (Catalog # ABO12590) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .

#### **Anti-UBA1 Picoband Antibody - Background**

Ubiquitin-like modifier activating enzyme 1 (UBA1) is an enzyme which in humans is encoded by the UBA1 gene. The protein encoded by this gene catalyzes the first step in ubiquitin conjugation, or ubiquitination, to mark cellular proteins for degradation. Specifically, UBA1 catalyzes the ATP-dependent adenylation of ubiquitin (Ub), thereby forming a thioester bond between the two. It also continues to participate in subsequent steps of ubiquitination as a Ub carrier. UBA1 is one of only two human ubiquitin-activating enzymes (E1), the other being UBA6, and thus is largely responsible for protein ubiquitination in humans. Through its central role in ubiquitination, UBA1 has been linked to cell cycle regulation, endocytosis, signal transduction, apoptosis, DNA damage repair, and transcriptional regulation. Additionally, UBE1 helps regulate the NEDD8 pathway, thus implicating it in protein folding, as well as mitigating the depletion of ubiquitin levels during stress.