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Anti-UBA1 Picoband Antibody

Catalog # ABO12590

Specification

Anti-UBA1 Picoband Antibody - Product Information

Application	**WB**
Primary Accession	P22314
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

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 HDQGTAQWADLSSQFYLREEDIGKNRAEVSQPRLAELN), 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:1447181, PubMed:1606621, PubMed:33108101). 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:1447181). 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:22456334).

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 Cytomety
- Cell Culture

Anti-UBA1 Picoband Antibody - Images

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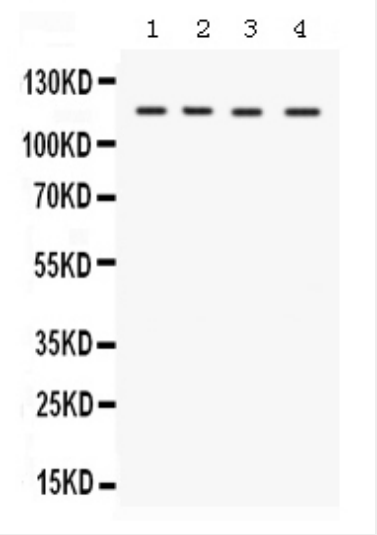

Western blot analysis of UBA1 expression in rat liver extract (lane 1), mouse liver extract (lane 2), mouse testis extract (lane 3) and HELA whole cell lysates (lane 4). UBA1 at 117KD was detected using rabbit anti- UBA1 Antigen Affinity purified polyclonal antibody (Catalog # ABO12590) at0.5 ??g/mL. 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 ubiquination 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.