

Anti-UBA1 Picoband Antibody

Catalog # ABO12590

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.

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
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. .
Source	Eukaryota
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.

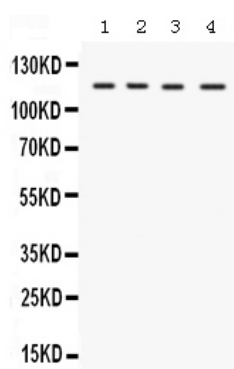
Protein Information

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.

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.

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 .

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.