

## Anti-E1 Ubiquitin Activating Enzyme/UBA1 Antibody Picoband®

Catalog Number: PB9904

### About UBA1

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.

### Overview

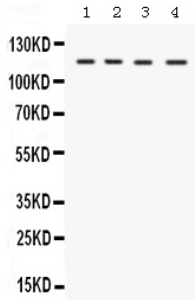
Product Name	Anti-E1 Ubiquitin Activating Enzyme/UBA1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-E1 Ubiquitin Activating Enzyme/UBA1 Antibody Picoband® catalog # PB9904. Tested in WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> , and 0.05 mg NaN <sub>3</sub> . *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P22314

### Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human UBA1, different from the related mouse and rat sequences by one amino acid.
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Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

## Anti-E1 Ubiquitin Activating Enzyme/UBA1 Antibody Picoband® (PB9904) Images



Western blot analysis of UBA1 using anti-UBA1 antibody (PB9904). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: rat liver tissue lysates, Lane 2: mouse liver tissue lysates. Lane 3: mouse testis tissue lysates. Lane 4: HELA whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-UBA1 antigen affinity purified polyclonal antibody (Catalog # PB9904) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for UBA1 at approximately 117 kDa. The expected band size for UBA1 is at 118 kDa.

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