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Anti-SAE2/UBA2 Antibody Picoband™ (monoclonal, 5H11)

Catalog # ABO14870

Product Information

Application	WB, FC
Primary Accession	Q9UBT2
Host	Mouse
Isotype	Mouse IgG2b
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-SAE2/UBA2 Antibody Picoband™ (monoclonal, 5H11) . Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Mouse, Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500 □g/ml.

Additional Information

Gene ID	10054
Other Names	SUMO-activating enzyme subunit 2, 2.3.2.-, Anthracycline-associated resistance ARX, Ubiquitin-like 1-activating enzyme E1B, Ubiquitin-like modifier-activating enzyme 2, UBA2, SAE2, UBLE1B
Calculated MW	71224
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat Flow Cytometry, 1-3 □g/1x10^6 cells, Human
Subcellular Localization	Nucleus. Cytoplasm.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Clone Names	Clone: 5H11
Immunogen	E. coli-derived human SAE2/UBA2 recombinant protein (Position: E449-K564).
Cross Reactivity	No cross-reactivity with other proteins.
Storage	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.

Protein Information

Name	UBA2
Synonyms	SAE2, UBLE1B
Function	The heterodimer acts as an E1 ligase for SUMO1, SUMO2, SUMO3, and probably SUMO4. It mediates ATP-dependent activation of SUMO proteins followed by formation of a thioester bond between a SUMO protein and a conserved active site cysteine residue on UBA2/SAE2.
Cellular Location	Cytoplasm. Nucleus. Note=Shuttles between the cytoplasm and the nucleus, sumoylation is required either for nuclear translocation or nuclear retention

Background

Ubiquitin-like 1-activating enzyme E1B (UBLE1B) also known as SUMO-activating enzyme subunit 2 (SAE2) is an enzyme that in humans is encoded by the UBA2 gene. Posttranslational modification of proteins by the addition of the small protein SUMO (see SUMO1; MIM 601912), or sumoylation, regulates protein structure and intracellular localization. SAE1 (MIM 613294) and UBA2 form a heterodimer that functions as a SUMO-activating enzyme for the sumoylation of proteins

Images

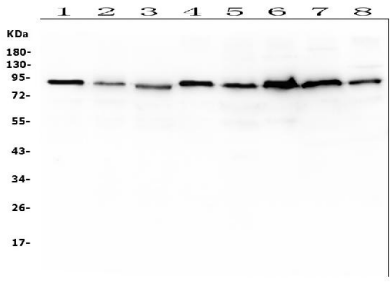
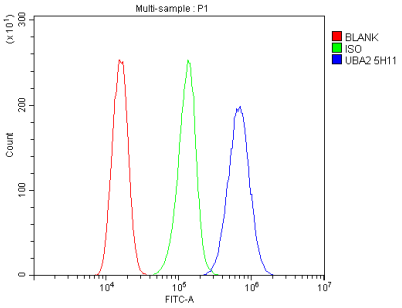


Figure 1. Western blot analysis of UBA2 using anti-UBA2 antibody (M03816-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human K562 whole cell lysates
Lane 2: human Raji whole cell lysates
Lane 3: human THP-1 whole cell lysates
Lane 4: human SW579 whole cell lysates
Lane 5: human HepG2 whole cell lysates
Lane 6: human CCRF-CEM whole cell lysates
Lane 7: rat PC-12 whole cell lysates
Lane 8: mouse RAW246.7 whole cell lysates
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-UBA2 antigen affinity purified monoclonal antibody (Catalog # M03816-1) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for UBA2 at approximately 90KD. The expected band size for UBA2 is at 71KD.

Figure 2. Flow Cytometry analysis of A431 cells using anti-UBA2 antibody (M03816-1).
Overlay histogram showing A431 cells stained with M03816-1 (Blue line).The cells were blocked with 10%



normal goat serum. And then incubated with mouse anti-UBA2 Antibody (M03816-1,1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

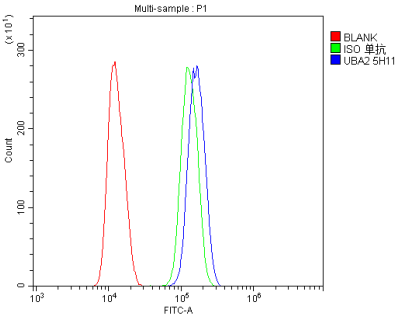


Figure 3. Flow Cytometry analysis of U20S cells using anti-UBA2 antibody (M03816-1).
Overlay histogram showing U20S cells stained with M03816-1 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-UBA2 Antibody (M03816-1,1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.