10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-SAE2/UBA2 Antibody Picoband™ (monoclonal, 5B13)

Catalog # ABO14904

Specification

Anti-SAE2/UBA2 Antibody Picoband™ (monoclonal, 5B13) - Product Information

Application	**WB, IHC**
Primary Accession	Q9UBT2
Host	**Mouse**
Isotype	**Mouse IgG2b**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-SAE2/UBA2 Antibody Picoband™ (monoclonal, 5B13) . Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat.

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

Anti-SAE2/UBA2 Antibody Picoband™ (monoclonal, 5B13) - 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
90 kDa KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
 Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat

Subcellular Localization
Nucleus; Cytoplasm

Contents
Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg NaN₃.

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.

Anti-SAE2/UBA2 Antibody Picoband™ (monoclonal, 5B13) - 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

Anti-SAE2/UBA2 Antibody Picoband™ (monoclonal, 5B13) - 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-SAE2/UBA2 Antibody Picoband™ (monoclonal, 5B13) - Images

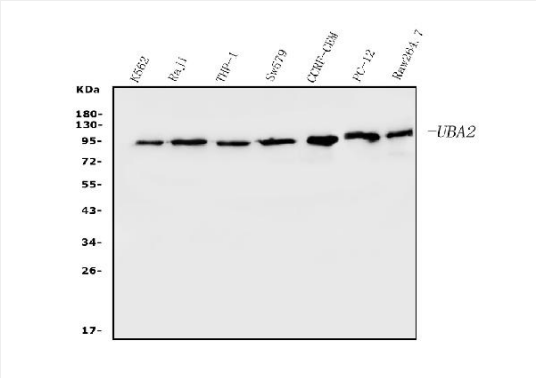

Figure 1. Western blot analysis of SAE2/UBA2 using anti-SAE2/UBA2antibody (M03816-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human K562 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 CCRF-CEM whole cell lysates,
Lane 6: rat PC-12 whole cell lysates,
Lane 7: mouse RAW264.7 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-SAE2/UBA2 antigen affinity purified monoclonal antibody (Catalog # M03816-2) 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 SAE2/UBA2 at approximately 90KD. The expected band size for SAE2/UBA2 is at 90KD.

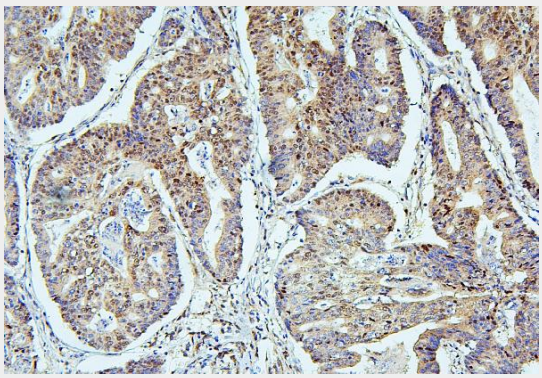

Figure 2. IHC analysis of SAE2/UBA2 using anti-SAE2/UBA2 antibody (M03816-2).
SAE2/UBA2 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-SAE2/UBA2 Antibody (M03816-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

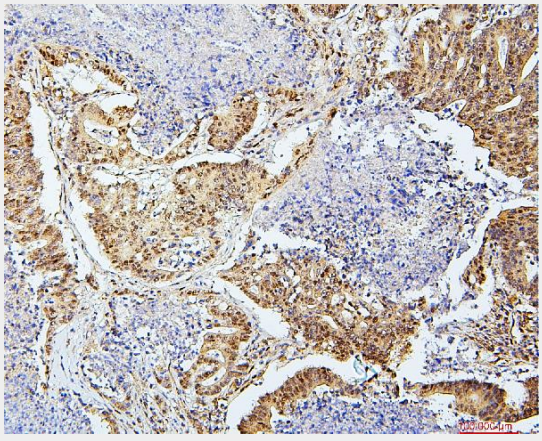

Figure 3. IHC analysis of SAE2/UBA2 using anti-SAE2/UBA2 antibody (M03816-2).
SAE2/UBA2 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-SAE2/UBA2 Antibody (M03816-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the

chromogen.

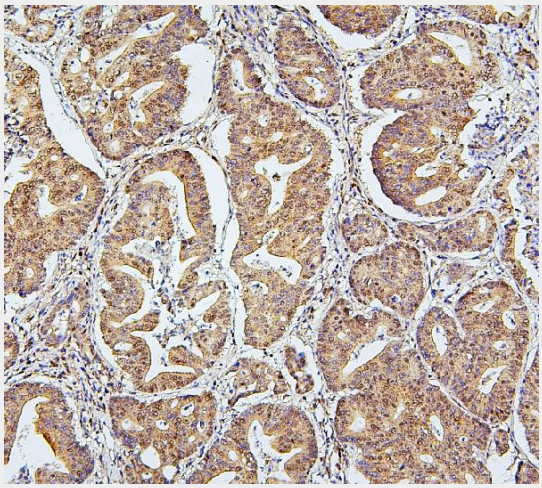

Figure 4. IHC analysis of SAE2/UBA2 using anti-SAE2/UBA2 antibody (M03816-2).
SAE2/UBA2 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-SAE2/UBA2 Antibody (M03816-2) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

Anti-SAE2/UBA2 Antibody Picoband™ (monoclonal, 5B13) - 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