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

Anti-SUMO Activating Enzyme E1 (RABBIT) Antibody
SAE1 Antibody
Catalog # ASR4409

Specification

Anti-SUMO Activating Enzyme E1 (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, E, I, LCI**
Application Note	**This purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band at ~60 kDa in size corresponding to SAE1 by western blotting in the appropriate cell lysate or extract.**
Physical State	**Lyophilized**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**Anti-SUMO Activating Enzyme E1 antibody was prepared from whole rabbit serum produced by repeated immunizations with a recombinant protein produced by baculoviral expression in insect cells (Sf9, Spodoptera frugiperda) corresponding to full length Human SUMO Activating Enzyme E1.**
Reconstitution Volume	**100 µL**
Reconstitution Buffer	**Restore with deionized water (or equivalent)**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-SUMO Activating Enzyme E1 (RABBIT) Antibody - Additional Information

Gene ID 10055

Other Names
10055

Purity
This purified antibody is directed against human SUMO Activating Enzyme E1 protein. The product was purified from monospecific antiserum by Protein A chromatography. A BLAST analysis was used to suggest that this antibody would react with SUMO Activating Enzyme E1 protein from human (100%) bovine, dog, chimpanzee (96%), mouse (93%), and rat (92%) based on a high degree of sequence homology. Cross reactivity against this protein from other sources has not been determined.

Storage Condition
Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-SUMO Activating Enzyme E1 (RABBIT) Antibody - Protein Information

Name SAE1

Synonyms AOS1, SUA1, UBLE1A

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
Nucleus.

Tissue Location
Expression level increases during S phase and drops in G2 phase (at protein level).

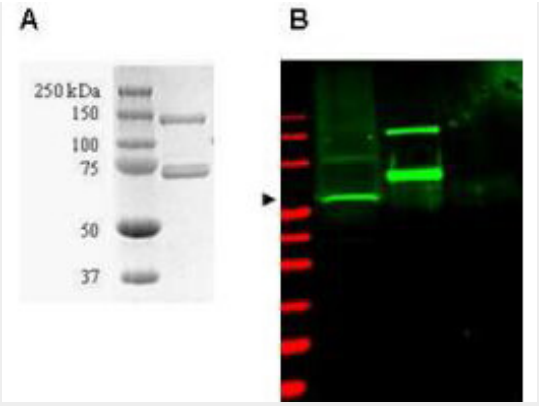
Anti-SUMO Activating Enzyme E1 (RABBIT) Antibody - Protocols

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-SUMO Activating Enzyme E1 (RABBIT) Antibody - Images

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



(Panel A) Coomassie-stained SDS-PAGE and (Panel B) western blotting of anti-SUMO Activating Enzyme (SAE1) antibody. (Panel A) Lane 1: MW Markers. Lane 2: GST-SAE1 recombinant protein [50ng]. (Panel B) Lane 1: MW Markers]red, 700 nm channel]. Lane 2: HeLa WC lysate [35 µg]. Lane 3: purified recombinant GST-SAE1 [50ng]. Lane 4: purified GST [300ng]. Primary Antibody: anti-SUMO Activating Enzyme (SAE1) at 1:2000 overnight at 4°C. Secondary Antibody: 1:10,000 dilution of IRDye™800 conjugated Gt-a-Rabbit IgG [H&L] MX Hu (611-132-122) for 45 min at room temperature. Results: The recombinant protein (with tag) ~60 kDa band present [green, 800nm channel]. IRDye™800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results. SDS-PAGE image courtesy of Proteome Resources, Englewood, CO, http://www.proteomeresources.com.

Anti-SUMO Activating Enzyme E1 (RABBIT) Antibody - Background

SUMO E1 activating enzyme (also called Ubiquitin-like 1 activating enzyme E1A, UBLE1A, AOS1, SAE1, and SUA1) is a heterodimeric (SAE1/SAE2) enzyme that activates the ubiquitin-like SUMO proteins (SUMO stands for Small Ubiquitin-like MOdifier.) The SAE1 (SUMO Activating Enzyme 1, also called Aos1) subunit resembles the N-terminal half of yeast UBA1; the SAE2 (also called Uba2) subunit corresponds to the C-terminal part of yeast UBA1 and contains the active site cysteine. In the SUMO activation step, SAE1/SAE2 uses ATP to adenylate the C-terminal glycine of SUMO-1 (the first of the three different mammalian SUMO proteins) then forms a high-energy thioester bond between the C-terminal glycine and the active site cysteine in SAE2 (Uba2). In the conjugation step, the SUMO moiety is transferred from SAE1/SAE2 to the active site cysteine (Cys 93) of the SUMO conjugating enzyme (SUMO E2, Ubc9) forming a SUMO-E2 thioester complex.