

**Anti-SUMO Activating Enzyme E1 (SAE1) (Rabbit) Antibody**  
**SAE1 Antibody**  
**Catalog # ASR5502**

**Specification**

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**Anti-SUMO Activating Enzyme E1 (SAE1) (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 ~37 kDa in size corresponding to SAE1 protein by western blotting in the appropriate cell lysate or extract.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	This purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal region of human SUMO Activating Enzyme E1 protein.
Preservative	0.01% (w/v) Sodium Azide

**Anti-SUMO Activating Enzyme E1 (SAE1) (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 affinity chromatography. This antibody is specific for human SAE1 protein. A BLAST analysis using the sequence of the immunizing peptide 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 -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. 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 (SAE1) (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

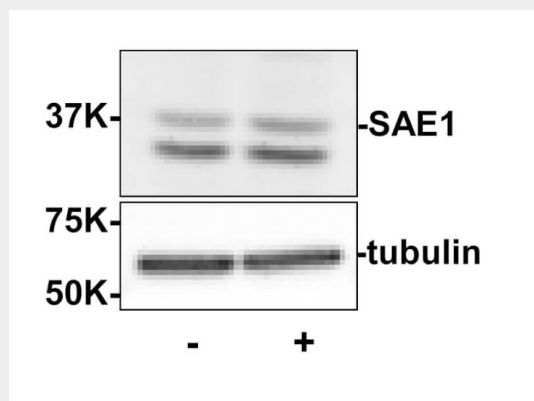
Expression level increases during S phase and drops in G2 phase (at protein level).

### Anti-SUMO Activating Enzyme E1 (SAE1) (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 Cytometry](#)
- [Cell Culture](#)

### Anti-SUMO Activating Enzyme E1 (SAE1) (Rabbit) Antibody - Images



Western blot using Rockland's Rabbit anti-SAE1 antibody shows detection of SAE1. Left lane (-) contains 20 µg human HeLa whole cell protein. Right lane (+) contains 20 µg human HeLa whole

cell protein from cells pre-treated with phosphatase inhibitor cocktail to prevent dephosphorylation of the target. Proteins were separated on a 10% SDS-PAGE and transferred onto nitrocellulose. After blocking with 5% milk-TBST 1 hr at room temperature, the membrane was probed with the primary antibody, Anti-SAE1, diluted to 2 µg/mL at room temperature for 3 hr followed by washes and reaction with HRP-conjugated secondary and ECL imaging. Personal communication, Xin-Hua Feng, Baylor College of Medicine, Houston, TX.

### **Anti-SUMO Activating Enzyme E1 (SAE1) (Rabbit) Antibody - Background**

SUMO E1 activating enzyme (also called Ubiquitin-like 1 activating enzyme E1A, UBLE1A, AOS1, SAE1, and SUA1) with SAE2 (also known as UBA2) forms 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) 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.