

**SAE2 Antibody**  
Catalog # ASC11129**Specification**

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**SAE2 Antibody - Product Information**

Application	WB, ICC, IF
Primary Accession	<a href="#">O9UBT2</a>
Other Accession	<a href="#">NP_005490</a> , <a href="#">4885649</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	SAE2 antibody can be used for detection of SAE2 by Western blot at 0.25 µg/mL. Antibody can also be used for immunocytochemistry starting at 4 µg/mL. For immunofluorescence start at 5 µg/mL.

**SAE2 Antibody - Additional Information**

Gene ID	10054
Target/Specificity	
UBA2;	

**Reconstitution & Storage**

SAE2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

SAE2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**SAE2 Antibody - 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**

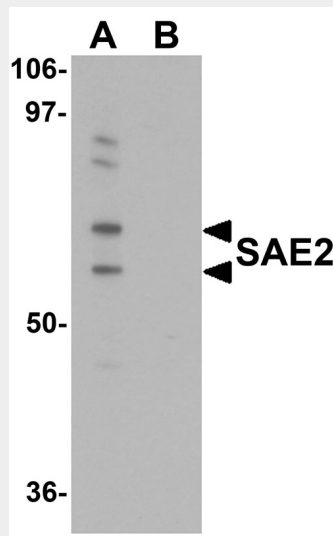
Cytoplasm. Nucleus. Note=Shuttles between the cytoplasm and the nucleus, sumoylation is required either for nuclear translocation or nuclear retention

## SAE2 Antibody - Protocols

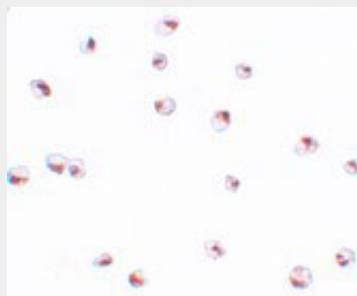
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

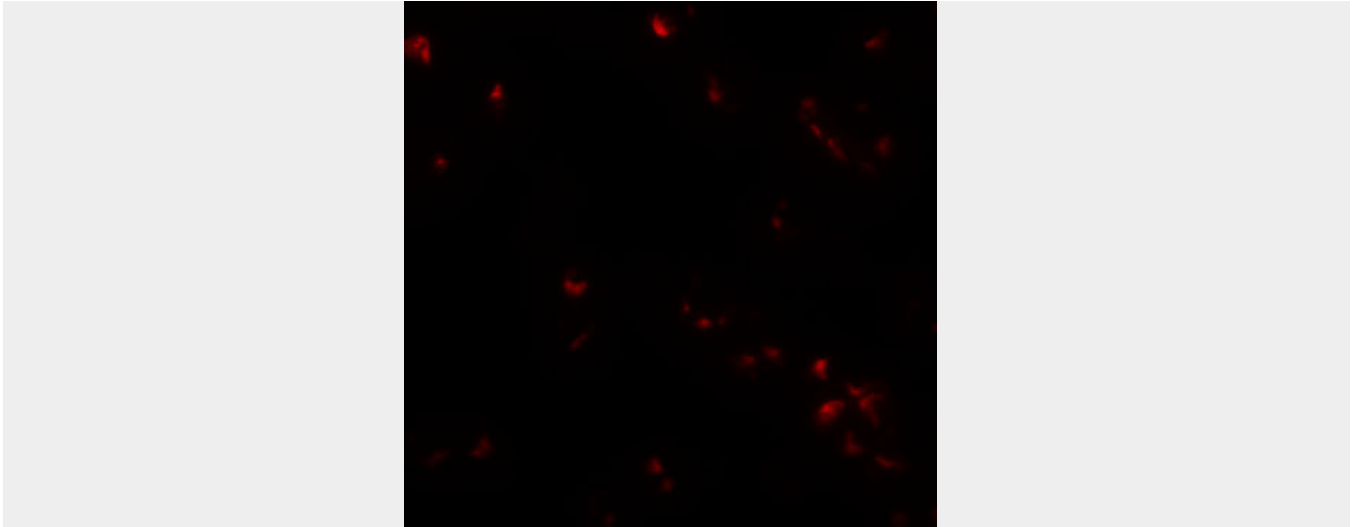
## SAE2 Antibody - Images



Western blot analysis of SAE2 in 293 cell lysate with SAE2 antibody at 0.25  $\mu\text{g}/\text{mL}$  in (A) the absence and (B) the presence of blocking peptide.



Immunocytochemistry of SAE2 in 293 cells with SAE2 antibody at 4  $\mu\text{g}/\text{mL}$ .



Immunofluorescence of SAE2 in 293 cells with SAE2 antibody at 20 µg/mL.

### **SAE2 Antibody - Background**

SAE2 Antibody: Small ubiquitin-like modifiers (SUMOs) are a family of small, related proteins (SUMO-1/2/3/4) that can be enzymatically attached to a target protein by a post-translational modification process termed sumoylation, a major regulator of protein function in cellular processes such as nuclear transport, transcriptional regulation, apoptosis and protein stability. This sumoylation is effected by the heterodimeric enzyme SAE1/SAE2 and the SUMO-1-conjugating enzyme Ubc9. The sumoylation pathway mediated by SAE1/SAE2 is distinct from other ubiquitin-like protein (Ubl) pathways.

### **SAE2 Antibody - References**

- Kamitani T, Kito K, Nguyen HP, et al. Characterization of a second member of the sentrin family of ubiquitin-like proteins. *J. Biol. Chem.*1998;273:11349-53.
- Kim KI, Baek SH, and Chung CH. Versatile protein tag, SUMO: its enzymology and biological function. *J. Cell. Physiol.*2002; 191: 257-68.
- Desterro JM, Rodriguez MS, Kemp GD, et al. Identification of the enzyme required for activation of the small ubiquitin-like protein SUMO-1. *J. Biol. Chem.*1999; 274:10618-24.
- Tatham MH, Jaffray E, Vaughan OA, et al. Polymeric chains of SUMO-2 and SUMO-3 are conjugated to protein substrates by SAE1/SAE2 and Ubc9. *J. Biol. Chem.*2001; 276:35368-74.