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

# SAE2 Antibody
**Catalog # ASC11129**

## Specification

### SAE2 Antibody - Product Information

| | |
|---|---|
| Application | **WB, IF, ICC, E** |
| Primary Accession | Q9UBT2 |
| Other Accession | NP_005490, 4885649 |
| 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℃ for three months and -20℃, 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

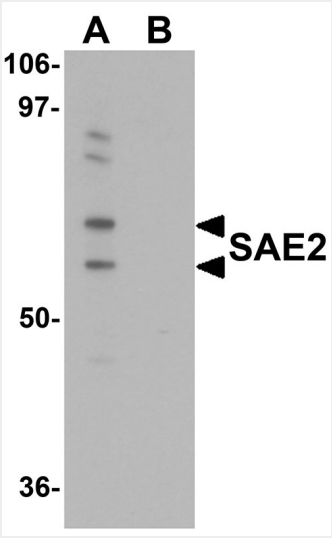
10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

## SAE2 Antibody - Protocols

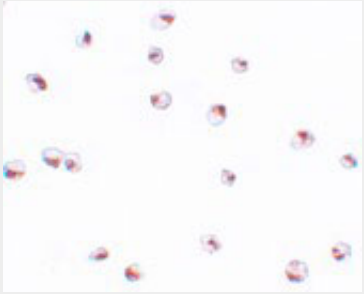
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## SAE2 Antibody - Images

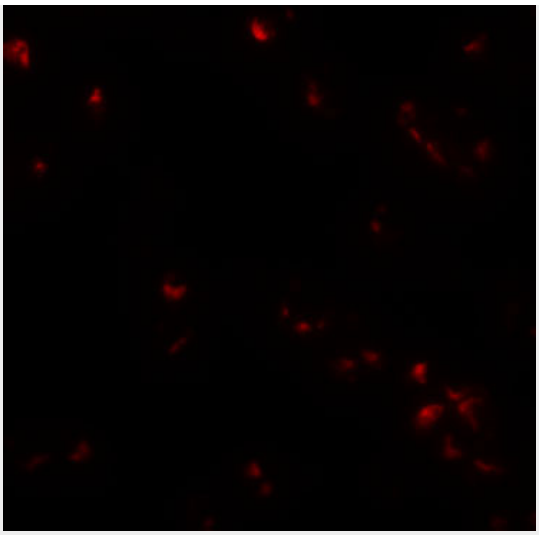



Western blot analysis of SAE2 in 293 cell lysate with SAE2 antibody at 0.25 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunocytochemistry of SAE2 in 293 cells with SAE2 antibody at 4 µg/mL.

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



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 Ubch9. 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.