

SAE2 Antibody
Catalog # ASC11129

Specification

SAE2 Antibody - Product Information

Application	WB, ICC, IF
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°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

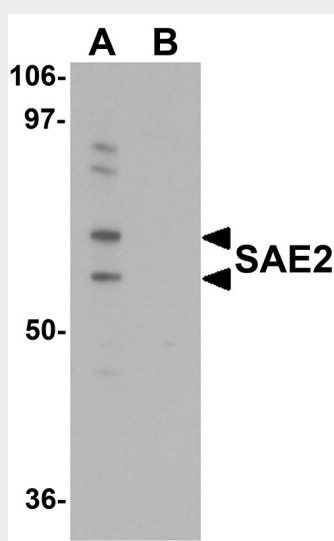
Cytoplasm. Nucleus. Note=Shuttles between the cytoplasm and the nucleus, sumoylation is required either for nuclear translocation or nuclear retention

SAE2 Antibody - Protocols

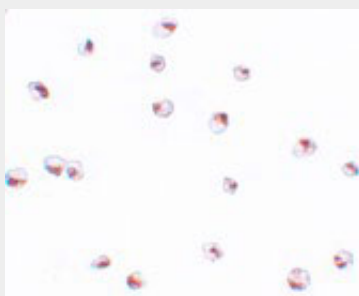
Provided below are standard protocols that you may find useful for product applications.

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

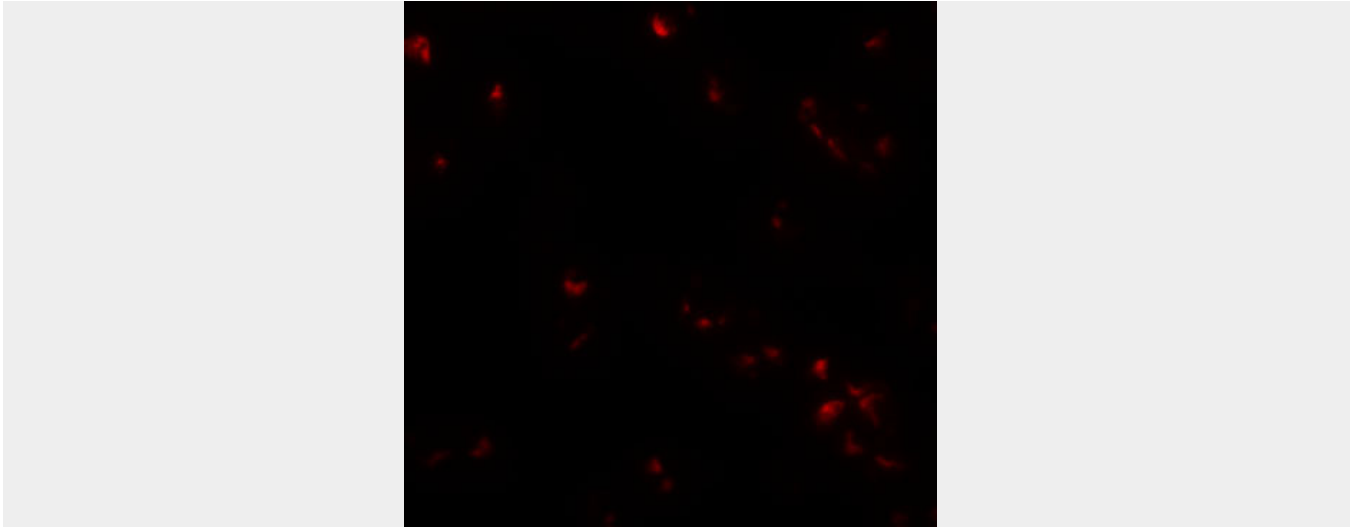
SAE2 Antibody - Images



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.