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SAE2 Antibody

Catalog # ASC11129

Product Information

Application	WB, IF, ICC, E
Primary Accession	Q9UBT2
Other Accession	NP_005490, 4885649
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	71224
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	SAE2 antibody can be used for detection of SAE2 by Western blot at 0.25 g/mL. Antibody can also be used for immunocytochemistry starting at 4 g/mL. For immunofluorescence start at 5 g/mL.

Additional Information

Gene ID	10054
Other Names	SUMO-activating enzyme subunit 2, 6.3.2.-, Anthracycline-associated resistance ARX, Ubiquitin-like 1-activating enzyme E1B, Ubiquitin-like modifier-activating enzyme 2, UBA2, SAE2, UBLE1B
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.

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

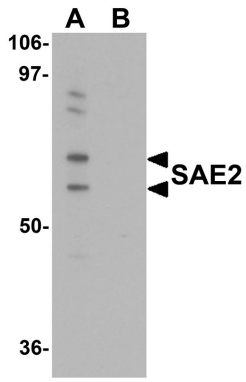
Background

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.

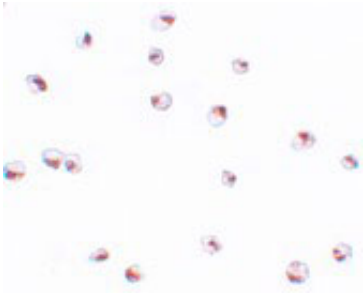
References

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.

Images

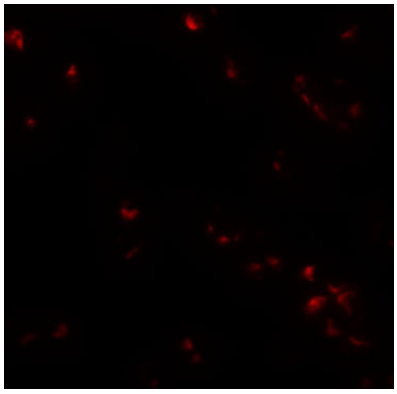


Western blot analysis of SAE2 in 293 cell lysate with SAE2 antibody at 0.25 µg/mL in (A) the absence and (B) the presence of blocking peptide.



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

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



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