

# AOS-1 (H-207): sc-135182

## BACKGROUND

Proteolytic degradation by the ubiquitin (Ub) system is essential for normal cell cycle progression, cellular differentiation and stress responses. Proteins conjugated to Ub are marked for progressive degradation by the 26S Proteasome. AOS-1, also designated SUMO-1-activating enzyme or ubiquitin-like 1-activating enzyme E1A, belongs to the ubiquitin-activating E1 family of proteins and plays an important role in the first step of the UBL1 conjugation pathway. AOS-1, which is a dimeric enzyme, functions as a UBL1 E1 ligase, mediating the ATP-dependent activation of UBL1. AOS-1 can bind with UBLE1A and UBLE1B to form a heterodimer which can bind UBL1.

## REFERENCES

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3. Gong, L., Li, B., Millas, S. and Yeh, E.T. 1999. Molecular cloning and characterization of human AOS-1 and UBA2, components of the sentrin-activating enzyme complex. *FEBS Lett.* 448: 185-189.
4. Desterro, J., J.M., Rodriguez, M.S., Kemp, G.D. and Hay, R.T. 1999. Identification of the enzyme required for activation of the small ubiquitin-like protein SUMO-1. *J. Biol. Chem.* 274: 10618-10624.
5. Engelhardt, O.G., Illich, E., Kochs, G. and Haller, O. 2001. Interferon-induced antiviral Mx1 GTPase is associated with components of the SUMO-1 system and promyelocytic leukemia protein nuclear bodies. *Exp. Cell Res.* 271: 286-295.
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## CHROMOSOMAL LOCATION

Genetic locus: SAE1 (human) mapping to 19q13.32; Sae1 (mouse) mapping to 7 A2.

## SOURCE

AOS-1 (H-207) is a rabbit polyclonal antibody raised against amino acids 51-257 mapping within an internal region of AOS-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

AOS-1 (H-207) is recommended for detection of AOS-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AOS-1 (H-207) is also recommended for detection of AOS-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for AOS-1 siRNA (h): sc-60174, AOS-1 siRNA (m): sc-60175, AOS-1 shRNA Plasmid (h): sc-60174-SH, AOS-1 shRNA Plasmid (m): sc-60175-SH, AOS-1 shRNA (h) Lentiviral Particles: sc-60174-V and AOS-1 shRNA (m) Lentiviral Particles: sc-60175-V.

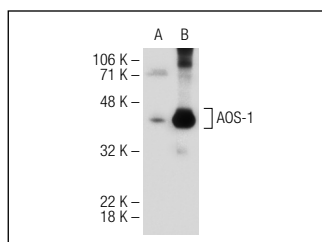
Molecular Weight of AOS-1: 38 kDa.

Positive Controls: AOS-1 (h): 293 Lysate: sc-112313, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



AOS-1 (H-207): sc-135182. Western blot analysis of AOS-1 expression in non-transfected: sc-110760 (A) and human AOS-1 transfected: sc-112313 (B) 293 whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.