



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# AOS-1 (h): 293T Lysate: sc-176690

## 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

1. Desterro, J.M., Rodriguez, M.S. and Hay, R.T. 1998. SUMO-1 modification of I $\kappa$ B- $\alpha$  inhibits NF $\kappa$ B activation. *Mol. Cell* 2: 233-239.
2. Okuma, T., Honda, R., Ichikawa, G., Tsumagari, N. and Yasuda, H. 1999. *In vitro* SUMO-1 modification requires two enzymatic steps, E1 and E2. *Biochem. Biophys. Res. Commun.* 254: 693-698.
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.
6. Pichler, A., Knipscheer, P., Saitoh, H., Sixma, T.K. and Melchior, F. 2004. The RanBP2 SUMO E3 ligase is neither HECT nor RING type. *Nat. Struct. Mol. Biol.* 11: 984-991.
7. Lois, L.M. and Lima, C.D. 2005. Structures of the SUMO E1 provide mechanistic insights into SUMO activation and E2 recruitment to E1. *EMBO J.* 24: 439-451.

## CHROMOSOMAL LOCATION

Genetic locus: SAE1 (human) mapping to 19q13.32.

## PRODUCT

AOS-1 (h): 293T Lysate represents a lysate of human AOS-1 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## STORAGE

Store at -20 $^{\circ}$  C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

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

## APPLICATIONS

AOS-1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive AOS-1 antibodies. Recommended use: 10-20  $\mu$ l per lane.

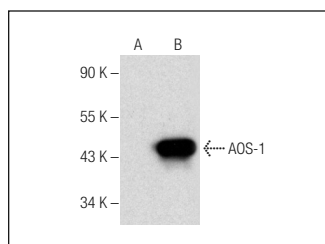
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

AOS-1 (E-12): sc-376628 is recommended as a positive control antibody for Western Blot analysis of enhanced human AOS-1 expression in AOS-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

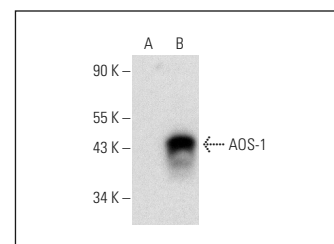
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



AOS-1 (E-12): sc-376628. Western blot analysis of AOS-1 expression in non-transfected: sc-117752 (A) and human AOS-1 transfected: sc-176690 (B) 293T whole cell lysates.



AOS-1 (H-9): sc-398080. Western blot analysis of AOS-1 expression in non-transfected: sc-117752 (A) and human AOS-1 transfected: sc-176690 (B) 293T whole cell lysates.

## RESEARCH USE

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