

# AIDA (D-14): sc-163665

## BACKGROUND

AIDA (Axin interactor, dorsalization associated protein), also known as C1orf80, is a 306 amino acid protein that belongs to the axin interactor family. Expressed in a variety of tissues, including skeletal muscle and heart, AIDA functions as a ventralizing factor during embryogenesis, disrupting Axin homodimerization and inhibiting Axin-mediated JNK activation. Axin, a scaffold protein, is important for both JNK signaling and the canonical Wnt pathway, two processes that play an essential role in embryonic dorsoventral patterning. Disruption of Axin by AIDA results in the negative regulation of JNK and Wnt signaling, thereby affecting embryonic developmental events. Three isoforms of AIDA exist due to alternative splicing events.

## REFERENCES

- Andersson, B., Wentland, M.A., Ricafrente, J.Y., Liu, W. and Gibbs, R.A. 1996. A "double adaptor" method for improved shotgun library construction. *Anal. Biochem.* 236: 107-113.
- Zhang, Y., Neo, S.Y., Wang, X., Han, J. and Lin, S.C. 1999. Axin forms a complex with MEK1 and activates c-Jun NH<sub>2</sub>-terminal kinase/stress-activated protein kinase through domains distinct from Wnt signaling. *J. Biol. Chem.* 274: 35247-35254.
- Kimura, K., Wakamatsu, A., Suzuki, Y., Ota, T., Nishikawa, T., Yamashita, R., Yamamoto, J., Sekine, M., Tsuritani, K., Wakaguri, H., Ishii, S., Sugiyama, T., Saito, K., Isono, Y., Irie, R., Kushida, N., Yoneyama, T., Otsuka, R., et al. 2006. Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. *Genome Res.* 16: 55-65.
- Deng, F., Price, M.G., Davis, C.F., Mori, M. and Burgess, D.L. 2006. Stargazin and other transmembrane AMPA receptor regulating proteins interact with synaptic scaffolding protein MAGI-2 in brain. *J. Neurosci.* 26: 7875-7884.
- Rui, Y., Xu, Z., Xiong, B., Cao, Y., Lin, S., Zhang, M., Chan, S.C., Luo, W., Han, Y., Lu, Z., Ye, Z., Zhou, H.M., Han, J., Meng, A. and Lin, S.C. 2007. A  $\beta$ -catenin-independent dorsalization pathway activated by Axin/JNK signaling and antagonized by AIDA. *Dev. Cell* 13: 268-282.
- Lu, Z., Liu, W., Huang, H., He, Y., Han, Y., Rui, Y., Wang, Y., Li, Q., Ruan, K., Ye, Z., Low, B.C., Meng, A. and Lin, S.C. 2008. Protein encoded by the Axin(Fu) allele effectively downregulates Wnt signaling but exerts a dominant negative effect on c-Jun N-terminal kinase signaling. *J. Biol. Chem.* 283: 13132-13139.

## CHROMOSOMAL LOCATION

Genetic locus: AIDA (human) mapping to 1q41; Aida (mouse) mapping to 1.

## SOURCE

AIDA (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AIDA of human origin.

## STORAGE

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

## PRODUCT

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

Blocking peptide available for competition studies, sc-163665 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

AIDA (D-14) is recommended for detection of AIDA of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

AIDA (D-14) is also recommended for detection of AIDA in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for AIDA siRNA (h): sc-88746; AIDA shRNA Plasmid (h): sc-88746-SH and AIDA shRNA (h) Lentiviral Particles: sc-88746-V.

Molecular Weight of AIDA: 35 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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.