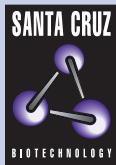


# Activin (dC-15): sc-27674



The Power to Question

## BACKGROUND

Cytokines of the transforming growth factor  $\beta$  (TGF $\beta$ ) superfamily act through an evolutionarily conserved signaling pathway to elicit a diverse range of biological responses. These factors signal through a heteromeric complex of type I and II serine/threonine kinase receptors that phosphorylate members of the Smad family of transcription factors. Activins, members of the TGF $\beta$  superfamily, promote a signaling pathway that influences embryo development and cell differentiation in adult *Drosophila melanogaster*. In *Drosophila*, Activin mediates neuronal remodeling in an ecdysone receptor B1 isoform (EcR-B1) expression-dependent manner.

## REFERENCES

- Childs, S.R., Wrana, J.L., Arora, K., Attisano, L., O'Connor, M.B. and Massagué, J. 1993. Identification of a *Drosophila* Activin receptor. Proc. Natl. Acad. Sci. USA 90: 9475-9479.
- Wrana, J.L., Tran, H., Attisano, L., Arora, K., Childs, S.R., Massagué, J. and O'Connor, M.B. 1994. Two distinct transmembrane serine/threonine kinases from *Drosophila melanogaster* form an Activin receptor complex. Mol. Cell. Biol. 14: 944-950.
- Kutty, G., Kutty, R.K., Samuel, W., Duncan, T., Jaworski, C. and Wiggert, B. 1998. Identification of a new member of TGF $\beta$  superfamily in *Drosophila*: the first invertebrate Activin gene. Biochem. Biophys. Res. Commun. 246: 644-649.
- Brummel, T., Abdollah, S., Haerry, T.E., Shimell, M.J., Merriam, J., Raftery, L., Wrana, J.L. and O'Connor, M.B. 1999. The *Drosophila* Activin receptor baboon signals through dSmad2 and controls cell proliferation but not patterning during larval development. Genes Dev. 13: 98-111.
- Das, P., Inoue, H., Baker, J.C., Beppu, H., Kawabata, M., Harland, R.M., Miyazono, K. and Padgett, R.W. 1999. *Drosophila* dSmad2 and ATR-I transmit Activin/TGF $\beta$  signals. Genes Cells 4: 123-134.
- Zheng, X., Wang, J., Haerry, T.E., Wu, A.Y., Martin, J., O'Connor, M.B., Lee, C.H. and Lee T. 2003. TGF $\beta$  signaling activates steroid hormone receptor expression during neuronal remodeling in the *Drosophila* brain. Cell 112: 303-315.
- Parker, L., Stathakis, D.G. and Arora, K. 2004. Regulation of BMP and Activin signaling in *Drosophila*. Prog. Mol. Subcell. Biol. 34: 73-101.
- Rodgarkia-Dara, C., Vejda, S., Erlach, N., Losert, A., Bursch, W., Berger, W., Schulte-Hermann, R. and Grusch, M. 2006. The Activin axis in liver biology and disease. Mutat. Res. 613: 123-137.
- Mukerji, S.S., Katsman, E.A., Wilber, C., Haner, N.A., Selman, W.R. and Hall, A.K. 2006. Activin is a neuronal survival factor that is rapidly increased after transient cerebral ischemia and hypoxia in mice. J. Cereb. Blood Flow Metab. 6: 1161-1172.

## STORAGE

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

## SOURCE

Activin (dC-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Activin of *Drosophila melanogaster* origin.

## 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-27674 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Activin (dC-15) is recommended for detection of precursor and mature Activin of *Drosophila melanogaster* 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).

Molecular Weight of Activin: 118 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.