

# ACTR-IIB (N-16): sc-5665

## BACKGROUND

Members of the transforming growth factor  $\beta$  superfamily bind to a pair of transmembrane proteins, known as receptor types I and II, which contain serine/threonine kinases and associate to form a signaling complex. Activin has been shown to bind a heteromeric noncovalent complex, which consists of a type I receptor, ACTR-IA (also designated ACVRI and ALK-2) or ACTR-IB (also designated ALK-4 and SKR2), and a type II receptor, ACTR-IIA (also designated ACVR2A) or ACTR-IIB (also designated ACVR2B). Both receptor types are highly expressed in brain. The Activin receptor family members are thought to mediate distinct effects on gene expression, cell differentiation, and morphogenesis in a dose dependent fashion.

## CHROMOSOMAL LOCATION

Genetic locus: ACVR2B (human) mapping to 3p22.2; Acvr2b (mouse) mapping to 9 F3.

## SOURCE

ACTR-IIB (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of ACTR-IIB 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.

Blocking peptide available for competition studies, sc-5665 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

ACTR-IIB (N-16) is recommended for detection of ACTR-IIB of mouse, rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ACTR-IIB (N-16) is also recommended for detection of ACTR-IIB in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ACTR-IIB siRNA (h): sc-40210, ACTR-IIB siRNA (m): sc-40211, ACTR-IIB shRNA Plasmid (h): sc-40210-SH, ACTR-IIB shRNA Plasmid (m): sc-40211-SH, ACTR-IIB shRNA (h) Lentiviral Particles: sc-40210-V and ACTR-IIB shRNA (m) Lentiviral Particles: sc-40211-V.

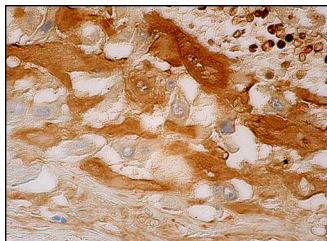
Molecular Weight of ACTR-IIB: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



ACTR-IIB (N-16): sc-5665. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of decidual cells.

## SELECT PRODUCT CITATIONS

1. Refaat, B.A., et al. 2004. Production and localization of activins and activin type IIA and IIB receptors by the human endosalpinx. *Reproduction* 128: 249-255.
2. Costelli, P., et al. 2008. Muscle myostatin signalling is enhanced in experimental cancer cachexia. *Eur. J. Clin. Invest.* 38: 531-538.
3. Mendis, S.H., et al. 2011. Activin A balances Sertoli and germ cell proliferation in the fetal mouse testis. *Biol. Reprod.* 84: 379-391.
4. Filby, C.E., et al. 2011. Stimulation of Activin A/Nodal signaling is insufficient to induce definitive endoderm formation of cord blood-derived unrestricted somatic stem cells. *Stem Cell Res. Ther.* 2: 16.
5. Guo, W., et al. 2013. AAV-mediated administration of myostatin pro-peptide mutant in adult Ldlr null mice reduces diet-induced hepatosteatosis and atherosclerosis. *PLoS ONE* 8: e71017.

## RESEARCH USE

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



Try **ACTR-IIB (G-7): sc-376593** or **ACTR-IIB (9D10): sc-134245**, our highly recommended monoclonal alternatives to ACTR-IIB (N-16).