

ACTR-IB (T-17): sc-11986

BACKGROUND

Members of the transforming growth factor β 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.

REFERENCES

1. Attisano, L., et al. 1993. Identification of human activin and TGF β type I receptors that form heteromeric kinase complexes with type II receptors. *Cell* 75: 671-680.
2. Carcamo, J., et al. 1994. Type I receptors specify growth-inhibitory and transcriptional responses to transforming growth factor β and activin. *Mol. Cell. Biol.* 14: 3810-3821.

CHROMOSOMAL LOCATION

Genetic locus: ACVR1B (human) mapping to 12q13.13; Acvr1b (mouse) mapping to 15 F2.

SOURCE

ACTR-IB (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ACTR-IB of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-11986 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ACTR-IB (T-17) is recommended for detection of ACTR-IB of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

ACTR-IB (T-17) is also recommended for detection of ACTR-IB in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ACTR-IB siRNA (h): sc-40208, ACTR-IB siRNA (m): sc-40209, ACTR-IB shRNA Plasmid (h): sc-40208-SH, ACTR-IB shRNA Plasmid (m): sc-40209-SH, ACTR-IB shRNA (h) Lentiviral Particles: sc-40208-V and ACTR-IB shRNA (m) Lentiviral Particles: sc-40209-V.

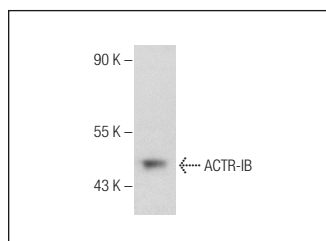
Molecular Weight of ACTR-IB: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



ACTR-IB (T-17): sc-11986. Western blot analysis of ACTR-IB expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. He, W., et al. 2002. Overexpression of Smad7 results in severe pathological alterations in multiple epithelial tissues. *EMBO J.* 21: 2580-2590.
2. Vanttinen, T., et al. 2003. Expression of activin/inhibin signaling components in the human adrenal gland and the effects of activins and inhibins on adrenocortical steroidogenesis and apoptosis. *J. Endocrinol.* 178: 479-489.
3. Licona, P., et al. 2006. Inhibins are the major activin ligands expressed during early thymocyte development. *Dev. Dyn.* 235: 1124-1132.

STORAGE

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

RESEARCH USE

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



Try **ACTR-IB (ALEX66): sc-73677**, our highly recommended monoclonal alternative to ACTR-IB (T-17).