

ACTR-IIB (H-70): sc-25453

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 ACVR1 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 (H-70) is a rabbit polyclonal antibody raised against amino acids 108-177 of ACTR-IIB 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.

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.

APPLICATIONS

ACTR-IIB (H-70) 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), 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-IIB (H-70) is also recommended for detection of ACTR-IIB in additional species, including equine, canine and porcine.

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.

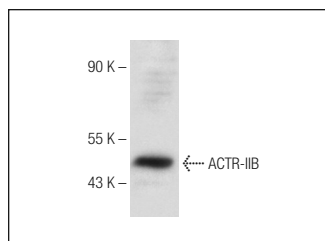
Molecular Weight of ACTR-IIB: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or NIH/3T3 whole cell lysate: sc-2210.

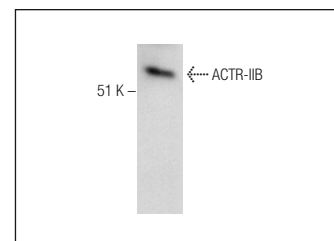
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



ACTR-IIB (H-70): sc-25453. Western blot analysis of ACTR-IIB expression in NIH/3T3 whole cell lysate.



ACTR-IIB (H-70): sc-25453. Western blot analysis of ACTR-IIB expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Kwong, K., et al. 2004. Target ablation-induced regulation of macrophage recruitment into the olfactory epithelium of Mip-1 $\alpha^{-/-}$ mice and restoration of function by exogenous MIP-1 α . *Physiol. Genomics* 20: 73-86.
2. Perron, J.C. and Dodd, J. 2009. ACTR-IIA and BMPRII Type II BMP receptor subunits selectively required for Smad4-independent BMP7-evoked chemotaxis. *PLoS ONE* 4: e8198.
3. Stewart, A., et al. 2010. BMP-3 promotes mesenchymal stem cell proliferation through the TGF- β /activin signaling pathway. *J. Cell. Physiol.* 223: 658-666.
4. Dwivedi, P.P., et al. 2013. Regulation of bone morphogenetic protein signalling and cranial osteogenesis by Gpc1 and Gpc3. *Bone* 55: 367-376.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **ACTR-IIB (G-7): sc-376593** or **ACTR-IIB (9D10): sc-134245**, our highly recommended monoclonal alternatives to ACTR-IIB (H-70).