

ACTR-IIA (A-24): sc-130679

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: ACVR2A (human) mapping to 2q22.3; Acvr2a (mouse) mapping to 2 C1.1.

SOURCE

ACTR-IIA (A-24) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of ACTR-IIA of human origin.

PRODUCT

Each vial contains 100 μ g of IgG in PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ACTR-IIA (A-24) is recommended for detection of ACTR-IIA of mouse 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), 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).

Suitable for use as control antibody for ACTR-IIA siRNA (h): sc-40206, ACTR-IIA siRNA (m): sc-40207, ACTR-IIA shRNA Plasmid (h): sc-40206-SH, ACTR-IIA shRNA Plasmid (m): sc-40207-SH, ACTR-IIA shRNA (h) Lentiviral Particles: sc-40206-V and ACTR-IIA shRNA (m) Lentiviral Particles: sc-40207-V.

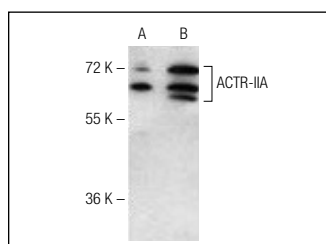
Molecular Weight of ACTR-IIA: 60 kDa.

Positive Controls: human ACTR-IIA transfected 293 whole cell lysates.

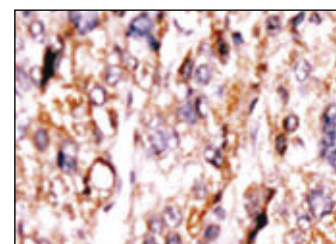
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



ACTR-IIA (A-24): sc-130679. Western blot analysis of ACTR-IIA expression in non-transfected (A) and human ACTR-IIA transfected (B) 293 whole cell lysates.



ACTR-IIA (A-24): sc-130679. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human hepatocarcinoma tissue showing cytoplasmic and membrane localization.

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.

PROTOCOLS

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



Try **ACTR-II (F-12): sc-390977**, our highly recommended monoclonal alternative to ACTR-IIA (A-24).