

ACTR-I (H-170): sc-25449

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.

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: ACVR1 (human) mapping to 2q24.1; Acvr1 (mouse) mapping to 2 C1.1.

SOURCE

ACTR-I (H-170) is a rabbit polyclonal antibody raised against amino acids 21-120 mapping near the N-terminus of ACTR-I 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.

APPLICATIONS

ACTR-I (H-170) is recommended for detection of ACTR-IA 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-I (H-170) is also recommended for detection of ACTR-IA in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ACTR-I siRNA (h): sc-40202, ACTR-I siRNA (m): sc-40203, ACTR-I shRNA Plasmid (h): sc-40202-SH, ACTR-I shRNA Plasmid (m): sc-40203-SH, ACTR-I shRNA (h) Lentiviral Particles: sc-40202-V and ACTR-I shRNA (m) Lentiviral Particles: sc-40203-V.

Molecular Weight (predicted) of ACTR-I: 57 kDa.

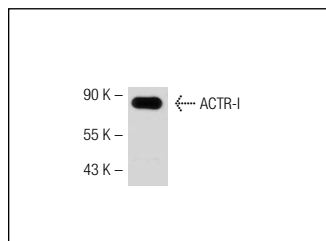
Molecular Weight (observed) of ACTR-I: 82 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410 or ES-2 cell lysate: sc-24674.

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-I (H-170): sc-25449. Western blot analysis of ACTR-I expression in SK-N-SH whole cell lysate.

SELECT PRODUCT CITATIONS

1. Medici, D., et al. 2010. Conversion of vascular endothelial cells into multipotent stem-like cells. *Nat. Med.* 16: 1400-1406.
2. Song, H., et al. 2012. ACVR1, a therapeutic target of fibrodysplasia ossificans progressiva, is negatively regulated by miR-148a. *Int. J. Mol. Sci.* 13: 2063-2077.

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.

MONOS
Satisfaction
Guaranteed

Try **ACTR-I (C-5): sc-374523**, our highly recommended monoclonal alternative to ACTR-I (H-170).