SANTA CRUZ BIOTECHNOLOGY, INC.

ACTR-IC (H-132): sc-135001

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ACTR-IC (Activin receptor type 1C), also referred to as Activin receptor-like kinase 7 (ALK-7), is a type I serine/threonine kinase receptor. ACTA-IC contains an extracellular binding domain, an intracellular serine/threonine kinase domain preceded by a GS box and a transmembrane domain. It is expressed throughout the digestive and central nervous system and localizes to the cell surface. Four ACTR-IC transcripts are generated by alternative splicing. Transcript 1 is the functional full length receptor, transcript 2 lacks a complete receptor binding domain and transcripts 3 and 4 are soluble proteins that lack a transmembrane domain. ACTR-IC is a receptor for Activin AB, Activin B and Nodal. In pancreatic cells, ACTR-IC forms a complex with Activin receptor type IIB (ACTR-IIB). The kinase domain of ACTR-IC can induce Smad2 and Smad3 signalling pathways. In some cell lines, ACTR-IC overexpression induces apoptosis and inhibits proliferation.

REFERENCES

1. Rydén, M., et al. 1997. A novel type I receptor serine-threonine kinase predominantly expressed in the adult central nervous system. J. Biol. Chem. 271: 30603-30609.
2. Kim, B.C., et al. 2004. Activin receptor-like kinase-7 induces apoptosis through activation of MAPKs in a Smad3-dependent mechanism in hepatoma cells. J. Biol. Chem. 279: 28458-28465.

CHROMOSOMAL LOCATION

Genetic locus: ACVR1C (human) mapping to 2q24.1; Acvr1c (mouse) mapping to 2 C1.1.

SOURCE

ACTR-IC (H-132) is a rabbit polyclonal antibody raised against amino acids 38-169 mapping near the N-terminus of ACTR-IC of human origin.

PRODUCT

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

APPLICATIONS

ACTR-IC (H-132) is recommended for detection of ACTR-IC of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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-IC (H-132) is also recommended for detection of ACTR-IC in additional species, including bovine.

Suitable for use as control antibody for ACTR-IC siRNA (h): sc-72337, ACTR-IC siRNA (m): sc-155862, ACTR-IC shRNA Plasmid (h): sc-72337-SH, ACTR-IC shRNA Plasmid (m): sc-155862-SH, ACTR-IC shRNA (h) Lentiviral Particles: sc-72337-V and ACTR-IC shRNA (m) Lentiviral Particles: sc-155862-V.

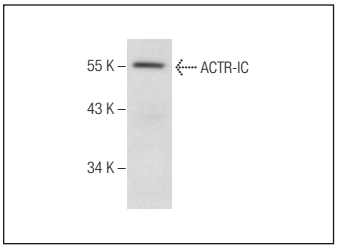
Molecular Weight of ACTR-IC: 55 kDa.

Positive Controls: JAR cell lysate: sc-2276.

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-IC (H-132): sc-135001. Western blot analysis of ACTR-IC expression in JAR 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.

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.