

ACTR-IIB (D-25): sc-130938

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

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2. Carcamo, J., Weis, F.M., Ventura, F., Wieser, R., Wrana, J.L., Attisano, L. and Massague, J. 1994. Type I receptors specify growth-inhibitory and transcriptional responses to transforming growth factor β and Activin. *Mol. Cell. Biol.* 14: 3810-3821.
3. Rosenzweig, B.L., Imamura, T., Okadome, T., Cox, G.N., Yamashita, H., ten Dijke, P., Heldin, C.H. and Miyazono, K. 1995. Cloning and characterization of a human type II receptor for bone morphogenetic proteins. *Proc. Natl. Acad. Sci. USA* 92: 7632-7636.
4. Armes, N.A. and Smith, J.C. 1997. The ALK-2 and ALK-4 Activin receptors transduce distinct mesoderm-inducing signals during early *Xenopus* development but do not co-operate to establish thresholds. *Development* 124: 3797-3804.
5. Ebendal, T., Bengtsson, H. and Soderstrom, S. 1998. Bone morphogenetic proteins and their receptors: potential functions in the brain. *J. Neurosci. Res.* 51: 139-146.
6. Armes, N.A., Neal, K.A. and Smith, J.C. 1999. A short loop on the ALK-2 and ALK-4 Activin receptors regulates signaling specificity but cannot account for all their effects on early *Xenopus* development. *J. Biol. Chem.* 274: 7929-7935.

CHROMOSOMAL LOCATION

Genetic locus: ACVR2B (human) mapping to 3p22.

SOURCE

ACTR-IIB (D-25) is an affinity purified rabbit polyclonal antibody raised against synthetic ACTR-IIB peptide of human origin.

PRODUCT

Each vial contains 50 μ g IgG in 500 μ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

RESEARCH USE

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

APPLICATIONS

ACTR-IIB (D-25) is recommended for detection of ACTR-IIB of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ACTR-IIB siRNA (h): sc-40210, ACTR-IIB shRNA Plasmid (h): sc-40210-SH and ACTR-IIB shRNA (h) Lentiviral Particles: sc-40210-V.

Molecular Weight of ACTR-IIB: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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).

STORAGE

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

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 (D-25).