SANTA CRUZ BIOTECHNOLOGY, INC.

BMPR-IB (N-17): sc-5679

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Two type I receptors have been characterized, BMPR-IA (also designated SKR5, ALK-3, and BRK-1) and BMPR-IB (also designated ALK-6 and SKR 6), that bind to bone morphogenetic proteins BMP-2, BMP-4, and osteogenic protein OP-1 (also designated BMP-7). BMPR-IA and BMPR-IB are both expressed in human glioma cell lines. The type II receptor, BMPR-II, efficiently binds to OP-1 and BMP-2 and weakly binds BMP-4, and it is widely expressed in different tissues, including brain. The BMP 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: BMPR1B (human) mapping to 4q22.3; Bmpr1b (mouse) mapping to 3 H1.

SOURCE

BMPR-IB (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of BMPR-IB 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.

Blocking peptide available for competition studies, sc-5679 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BMPR-IB (N-17) is recommended for detection of BMPR-IB of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

BMPR-IB (N-17) is also recommended for detection of BMPR-IB in additional species, including bovine and porcine.

Suitable for use as control antibody for BMPR-IB siRNA (h): sc-40218, BMPR-IB siRNA (m): sc-40219, BMPR-IB shRNA Plasmid (h): sc-40218-SH, BMPR-IB shRNA Plasmid (m): sc-40219-SH, BMPR-IB shRNA (h) Lentiviral Particles: sc-40218-V and BMPR-IB shRNA (m) Lentiviral Particles: sc-40219-V.

Molecular Weight of BMPR-IB: 45 kDa.

Positive Controls: DU 145 cell lysate: sc-2268, LNCaP cell lysate: sc-2231 or PC-3 cell lysate: sc-2220.

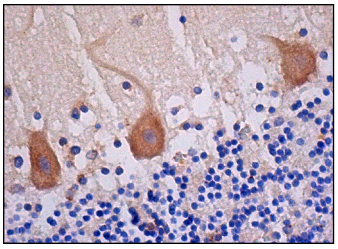
STORAGE

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.

DATA



BMPR-IB (N-17): sc-5679. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of purkinje cells.

SELECT PRODUCT CITATIONS

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3. Quarto, N., et al. 2008. Molecular mechanisms of FGF-2 inhibitory activity in the osteogenic context of mouse adipose-derived stem cells (mASCs). Bone 42: 1040-1052.
4. Abir, R., et al. 2008. Expression of bone morphogenetic proteins 4 and 7 and their receptors IA, IB, and II in human ovaries from fetuses and adults. Fertil. Steril. 89: 1430-1440.
5. Ye, L., et al. 2009. Bone morphogenetic protein-10 suppresses the growth and aggressiveness of prostate cancer cells through a Smad independent pathway. J. Urol. 181: 2749-2759.
6. Volkenstein, S., et al. 2009. Influence of bone morphogenetic protein-2 on spiral ganglion neurite growth *in vitro*. Eur. Arch. Otorhinolaryngol. 266: 1381-1389.
7. Yu, Y.Y., et al. 2010. Immunolocalization of BMPs, BMP antagonists, receptors, and effectors during fracture repair. Bone 46: 841-851.
8. Yu, Y.Y., et al. 2010. Bone morphogenetic protein 2 stimulates endochondral ossification by regulating periosteal cell fate during bone repair. Bone 47: 65-73.
9. Miyagi, M., et al. 2011. Bone morphogenetic protein receptor expressions in the adult rat brain. Neuroscience 176: 93-109.