SANTA CRUZ BIOTECHNOLOGY, INC.

BMPR-IB (H-44): sc-25455

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 (H-44) is a rabbit polyclonal antibody raised against amino acids 15-58 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.

APPLICATIONS

BMPR-IB (H-44) 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), 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), 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 (H-44) is also recommended for detection of BMPR-IB in additional species, including equine, canine, 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.

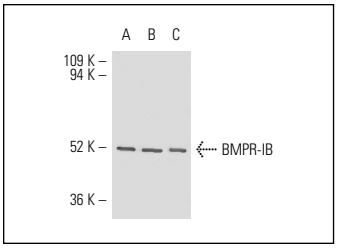
STORAGE

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

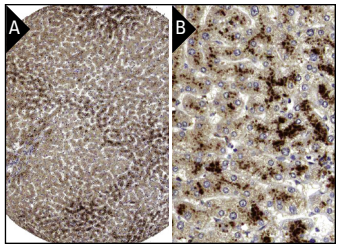
RESEARCH USE

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

DATA



BMPR-IB (H-44): sc-25455. Western blot analysis of BMPR-IB expression in DU 145 (**A**), LNCaP (**B**) and PC-3 (**C**) whole cell lysates.



BMPR-IB (H-44): sc-25455. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Tomoeda, M., et al. 2008. PLAP-1/asporin inhibits activation of BMP receptor via its leucine-rich repeat motif. Biochem. Biophys. Res. Commun. 371: 191-196.
2. Chen, D.F., et al. 2009. Autocrine BMP4 signaling involves effect of cholesterol myristate on proliferation of mesenchymal stem cells. Steroids 74: 1066-1072.
3. Medici, D., et al. 2010. Conversion of vascular endothelial cells into multipotent stem-like cells. Nat. Med. 16: 1400-1406.
4. Haubold, M., et al. 2010. Bone morphogenetic protein 4 (BMP4) signaling in retinoblastoma cells. Int. J. Biol. Sci. 6: 700-715.
5. Sun, R.Z., et al. 2010. Expression of GDF-9, BMP-15 and their receptors in mammalian ovary follicles. J. Mol. Histol. 41: 325-332.
6. Sakai, H., et al. 2012. Augmented autocrine bone morphogenic protein (BMP) 7 signaling increases the metastatic potential of mouse breast cancer cells. Clin. Exp. Metastasis 29: 327-338.
7. Lee, H.K., et al. 2012. Odontogenic ameloblasts-associated protein (ODAM), via phosphorylation by bone morphogenetic protein receptor type IB (BMPR-IB), is implicated in ameloblast differentiation. J. Cell. Biochem. 113: 1754-1765.
8. Giovanini, A.F., et al. 2012. Leukocyte-platelet-rich plasma (L-PRP) induces an abnormal histophenotype in craniofacial bone repair associated with changes in the immunopositivity of the hematopoietic clusters of differentiation, osteoproteins, and TGF-β1. Clin. Implant Dent. Relat. Res. E-published.