SANTA CRUZ BIOTECHNOLOGY, INC.

BMPR-IA (H-60): sc-20736

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: BMPR1A (human) mapping to 10q23.2; Bmpr1a (mouse) mapping to 14 B.

SOURCE

BMPR-IA (H-60) is a rabbit polyclonal antibody raised against amino acids 24-83 of BMPR-IA 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.

Available as agarose conjugate for immunoprecipitation, sc-20736 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

BMPR-IA (H-60) is recommended for detection of BMPR-IA 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-IA (H-60) is also recommended for detection of BMPR-IA in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for BMPR-IA siRNA (h): sc-40216, BMPR-IA siRNA (m): sc-40217, BMPR-IA shRNA Plasmid (h): sc-40216-SH, BMPR-IA shRNA Plasmid (m): sc-40217-SH, BMPR-IA shRNA (h) Lentiviral Particles: sc-40216-V and BMPR-IA shRNA (m) Lentiviral Particles: sc-40217-V.

Molecular Weight of BMPR-IA: 66 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, T98G cell lysate: sc-2294 or DU 145 cell lysate: sc-2268.

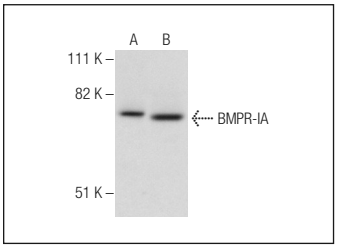
RESEARCH USE

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

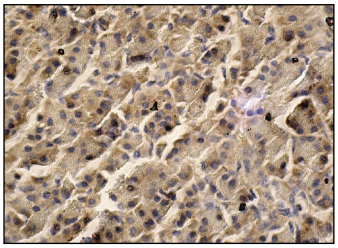
STORAGE

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

DATA



BMPR-IA (H-60): sc-20736. Western blot analysis of BMPR-IA expression in DU 145 (**A**) and T98G (**B**) whole cell lysates.



BMPR-IA (H-60): sc-20736. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Deng, H., et al. 2007. Bone morphogenetic protein-4 is overexpressed in colonic adenocarcinomas and promotes migration and invasion of HCT116 cells. Exp. Cell Res. 313: 1033-1044.
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. Du, J., et al. 2011. Integrin activation and internalization on soft ECM as a mechanism of induction of stem cell differentiation by ECM elasticity. Proc. Natl. Acad. Sci. USA 108: 9466-9471.
6. Zhang, Y., et al. 2012. Binding of carbon nanotube to BMP receptor 2 enhances cell differentiation and inhibits apoptosis via regulating bHLH transcription factors. Cell Death Dis. 3: e308.
7. Perotti, C., et al. 2012. The bone morphogenetic protein receptor-1A pathway is required for lactogenic differentiation of mammary epithelial cells *in vitro*. In Vitro Cell. Dev. Biol. Anim. 48: 377-384.
8. Chiu, C.Y., et al. 2012. The activation of MEK/ERK signaling pathway by bone morphogenetic protein 4 to increase hepatocellular carcinoma cell proliferation and migration. Mol. Cancer Res. 10: 415-427.