

BMPR-IB (C-8): sc-515886

BACKGROUND

Members of the transforming growth factor b 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.

REFERENCES

1. ten Dijke, P., et al. 1994. Identification of type I receptors for osteogenic protein-1 and bone morphogenetic protein-4. *J. Biol. Chem.* 269: 16985-16988.
2. Liu, F., et al. 1995. Human type II receptor for bone morphogenetic proteins (BMPs): extension of the two-kinase receptor model to the BMPs. *Mol. Cell. Biol.* 15: 3479-3486.
3. Rosenzweig, B.L., et al. 1995. Cloning and characterization of a human type II receptor for bone morphogenetic proteins. *Proc. Natl. Acad. Sci. USA* 92: 7632-7636.
4. Yamada, N., et al. 1996. Bone morphogenetic protein type IB receptor is progressively expressed in malignant glioma tumours. *Br. J. Cancer* 73: 624-629.
5. Soderstrom, S., et al. 1996. Expression of serine/threonine kinase receptors including the bone morphogenetic factor type II receptor in the developing and adult rat brain. *Cell Tissue Res.* 286: 269-279.
6. Yonemori, K., et al. 1997. Bone morphogenetic protein receptors and activin receptors are highly expressed in ossified ligament tissues of patients with ossification of the posterior longitudinal ligament. *Am. J. Pathol.* 150: 1335-1347.

CHROMOSOMAL LOCATION

Genetic locus: BMPR1B (human) mapping to 4q22.3; Bmpr1b (mouse) mapping to 3 H1.

SOURCE

BMPR-IB (C-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 11-35 near the N-terminus of BMPR-IB of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

BMPR-IB (C-8) is recommended for detection of BMPR-IB of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

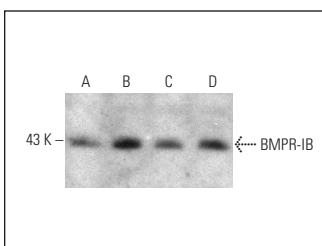
Molecular Weight of BMPR-IB: 45 kDa.

Positive Controls: RIN-m5F whole cell lysate: sc-364792, NIH/3T3 whole cell lysate: sc-2210 or Sol8 cell lysate: sc-2249.

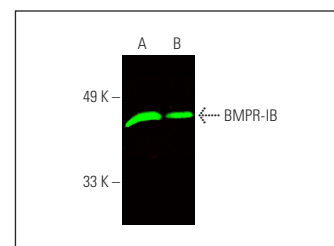
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



BMPR-IB (C-8): sc-515886. Western blot analysis of BMPR-IB expression in NRK (A), RIN-m5F (B), Sol8 (C) and L8 (D) whole cell lysates.



BMPR-IB (C-8): sc-515886. Near-infrared western blot analysis of BMPR-IB expression in NIH/3T3 (A) and RAW 264.7 (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

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 for detailed protocols and support products.