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.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: BMPR1A (human) mapping to 10q23.2.

SOURCE

BMPR-IA (7K7) is a mouse monoclonal antibody raised against recombinant BMPR-IA protein of human origin.

PRODUCT

Each vial contains 100 µg IgG2a in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

BMPR-IA (7K7) is recommended for detection of BMPR-IA of 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]) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Molecular Weight of BMPR-IA: 66 kDa.

Positive Controls: PC-3 cell lysate: sc-2220 or Human BMPR-IA transfected 293T whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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).

DATA

BMPR-IA (7K7): sc-134285. Western blot analysis of BMPR-IA expression in human BMPR-IA transfected (A) and non-transfected (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.