

BMPR-II (T-18): sc-5683

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: BMPR2 (human) mapping to 2q33.1; Bmpr2 (mouse) mapping to 1 C1.3.

SOURCE

BMPR-II (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of BMPR-II of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-5683 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BMPR-II (T-18) is recommended for detection of BMPR-II 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-II (T-18) is also recommended for detection of BMPR-II in additional species, including equine and canine.

Suitable for use as control antibody for BMPR-II siRNA (h): sc-40220, BMPR-II siRNA (m): sc-40221, BMPR-II shRNA Plasmid (h): sc-40220-SH, BMPR-II shRNA Plasmid (m): sc-40221-SH, BMPR-II shRNA (h) Lentiviral Particles: sc-40220-V and BMPR-II shRNA (m) Lentiviral Particles: sc-40221-V.

Molecular Weight of BMPR-II: 115 kDa.

Positive Controls: mouse heart extract: sc-2254 or IMR-32 cell lysate: sc-2409.

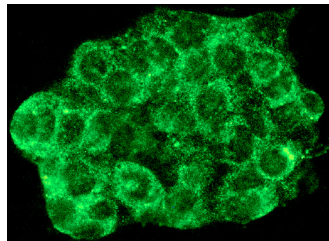
STORAGE

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

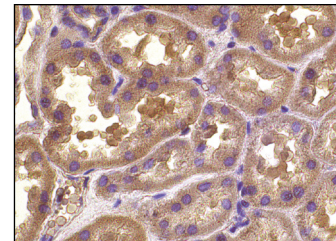
RESEARCH USE

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

DATA



BMPR-II (T-18): sc-5683. Immunofluorescence staining of methanol-fixed Hep G2 cells showing membrane localization.



BMPR-II (T-18): sc-5683. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Saito, A., et al. 2003. Activation of osteo-progenitor cells by a novel synthetic peptide derived from the bone morphogenetic protein-2 knuckle epitope. *Biochim. Biophys. Acta* 1651: 60-67.
2. Ye, L., et al. 2007. Hepatocyte growth factor up-regulates the expression of the bone morphogenetic protein (BMP) receptors, BMPR-IB and BMPR-II, in human prostate cancer cells. *Int. J. Oncol.* 30: 521-529.
3. Jin, W., et al. 2007. Trk C binds to the bone morphogenetic protein type II receptor to suppress bone morphogenetic protein signaling. *Cancer Res.* 67: 9869-9877.
4. Ye, L., et al. 2009. Bone morphogenetic protein-10 (BMP-10) suppresses growth and aggressiveness of prostate cancer cells through a SMAD independent pathway. *J. Urol.* 181: 2749-2759.
5. Bokobza, S.M., et al. 2009. Reduced expression of BMPR-IB correlates with poor prognosis and increased proliferation of breast cancer cells. *Cancer Genomics Proteomics* 6: 101-108.
6. Yu, Y.Y., et al. 2010. Immunolocalization of BMPs, BMP antagonists, receptors, and effectors during fracture repair. *Bone* 46: 841-851.
7. 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.
8. 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.
9. Miyagi, M., et al. 2011. Bone morphogenetic protein receptor expressions in the adult rat brain. *Neuroscience* 176: 93-109.

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Try **BMPR-II (E-1): sc-393304** or **BMPR-II (Z-18): sc-73752**, our highly recommended monoclonal alternatives to BMPR-II (T-18).