

BMPR-IA (E-16): sc-5676

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 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of BMPR-IA of human origin.

PRODUCT

Each vial contains 200 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-5676 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BMPR-IA (E-16) 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), 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 (E-16) 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.

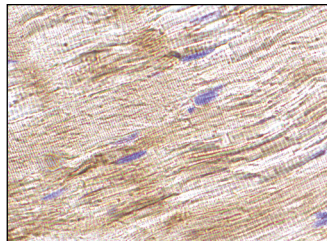
STORAGE

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-IA (E-16): sc-5676. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes cells.

SELECT PRODUCT CITATIONS

- Nohe, A., et al. 2003. Effect of the distribution and clustering of the type I A BMP receptor (ALK3) with the type II BMP receptor on the activation of signalling pathways. *J. Cell Sci.* 116: 3277-3284.
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- 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.
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- Honoré, S.M., et al. 2011. Neuronal loss and abnormal BMP/Smad signalling in the myenteric plexus of diabetic rats. *Auton. Neurosci.* 164: 51-61.
- Doi, T., et al. 2011. BMPR1A-mediated BMP1 signalling is disrupted in the cadmium-induced omphalocele in the chick model. *Pediatr. Surg. Int.* 27: 617-621.
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Try **BMPR-IA (7K7): sc-134285** or **BMPR-IA (4B7B2): sc-293175**, our highly recommended monoclonal alternatives to BMPR-IA (E-16).