Datasheet for ABIN7519710

BMPR2 Protein (His tag)

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Overview

Quantity:	100 µg
Target:	BMPR2
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This BMPR2 protein is labelled with His tag.

Product Details

Purpose:	Active Recombinant Human BMPR-2 Protein
Sequence:	SQNQERLCAF KDPYQQDLGI GESRISHENG TILCSKGSTC YGLWEKSKGD INLVKQGCWS HIGDPQECHY EECVVTTTPP SIQNGTYRFC CCSTDLCNVN FTENFPPPDT TPLSPPHSFN RDETI
Specificity:	Ser27-Ile151
Purity:	> 95 % by SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	< 0.1 EU/µg of the protein by LAL method.
Biological Activity Comment:	Measured by its binding ability in a functional ELISA. Immobilized Human BMPR2 at 1 µg/mL (100 µL/well) can bind Human BMP2 with a linear range of 0.015-7.4 µg/ml.

Target Details

Target:	BMPR2
Alternative Name:	BMPR-2 (BMPR2 Products)
Background:	Description: The bone morphogenetic protein type II receptor (BMPR-II, or BMPR2), a receptor for the transforming growth factor (TGF)-beta/bone morphogenetic protein (BMP) superfamily. Reduced expression or function of BMPR2 signaling leads to exaggerated TGF-beta signaling and altered cellular responses to TGF-beta. In endothelial cells, BMPR2 mutation increases the susceptibility of cells to apoptosis. BMPR2 transduces BMP signals by forming heteromeric complexes with and phosphorylating BMP type I receptors. The intracellular domain of BMPR2 is both necessary and sufficient for receptor complex interaction. It had been identified that BMPR2 plays a key role in cell growth. Its mutations lead to hereditary pulmonary hypertension, and knockout of Bmpr-II results in early embryonic lethality. The C-terminal tail of BMPR2 provides binding sites for a number of regulatory proteins that may initiate Smad-independent signalling. BMPR2 mutations were predicted to alter the BMP and TGF-b1/SMAD signalling pathways, resulting in proliferation rather than apoptosis of vascular cells, and greatly increase the risk of developing severe pulmonary arterial hypertension. BMPR2 gene result in familial Primary pulmonary hypertension (PPH) transmitted as an autosomal dominant trait, albeit with low penetrance. Heterozygous germline mutations of BMPR2 gene have been identified in patients with familial and sporadic PPH, indicating that BMPR2 may contribute to the maintenance of normal pulmonary vascular structure and function. Tctex-1, a light chain of the motor complex dynein, interacts with the cytoplasmic domain of BMPR2 and demonstrate that Tctex-1 is phosphorylated by BMPR-II, a function disrupted by PPH disease causing mutations within exon 12. BMPR2 and Tctex-1 co-localize to endothelium and smooth muscle within the media of pulmonary arterioles, key sites of vascular remodelling in PPH. Name: BMPR2, BMPR-II, BMPR3, BMR2, BRK-3, POVD1, PPH1, T-ALK, bone morphogenetic protein receptor type-2,BMPR-II,BMPR3,BMR2,BRK-3,POVD1,PPH1,T-ALK
Gene ID:	659
UniProt:	Q13873-1
Pathways:	Growth Factor Binding

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid votex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1 % BSA, 5 % HSA, 10 % FBS or 5 % Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.
Buffer:	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.
Storage:	-20 °C,-80 °C
Storage Comment:	Store the lyophilized protein at -20°C to -80°C for long term.|After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.