Datasheet for ABIN7194421

BMPR2 Protein (His tag,Fc Tag)

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Overview

Quantity:	200 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,Fc Tag.

Product Details

Purpose:	Recombinant Human BMPR2 Protein (His & Fc Tag)(Active)
Sequence:	Met 1-Ile 151
Characteristics:	A DNA sequence encoding the human BMPR-II (NP_001195.2) extracellular domain (Met 1-Ile 151) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus.
Purity:	> 90 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per µg as determined by the LAL method.
Biological Activity Comment:	Measured by its binding ability in a functional ELISA.2. Immobilized human BMPR-II-Fc at 10 µg/mL (100 µl/well) can bind biotinylated human BMP2-Fc, The EC50 of biotinylated human BMP2-Fc (Cat:PKSH031985) is 80-110 ng/mL.

Target Details

Target:	BMPR2
Alternative Name:	BMPR2 (BMPR2 Products)
Background:	Background: 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. Synonym: BMPR-II,BMPR3,BMR2,BRK-3,POVD1,PPH1,T-ALK
Molecular Weight:	42 kDa
NCBI Accession:	NP_001195
Pathways:	Growth Factor Binding

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized

Handling

Reconstitution:	Please refer to the printed manual for detailed information.
Buffer:	Lyophilized from sterile PBS, pH 7.4
Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.