Datasheet for ABIN7194416

BMPR1A Protein (His tag,Fc Tag)

1 Image

Go to Product page

Overview

Quantity:	100 µg
Target:	BMPR1A
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This BMPR1A protein is labelled with His tag,Fc Tag.

Product Details

Purpose:	Recombinant Mouse BMPRIA/ALK-3 Protein (His & Fc Tag)(Active)
Sequence:	Met 1-Arg 152
Characteristics:	A DNA sequence encoding the extracellular domain (Met 1-Arg 152) of mouse ALK3 (NP_033888.2) precursor was fused with the Fc region of human IgG1 at the C-terminus.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin Level:	< 1.0 EU per µg of the protein as determined by the LAL method.
Biological Activity Comment:	Measured by its ability to inhibit BMP4-induced activity in MC3T3-E1 Mouse osteoblastic cells. The ED50 for this effect is typically 0.1-0.3 µg/ml in the presence of 50 ng/mL of recombinant human BMP4.

Target Details

Target:	BMPR1A

Target Details

Alternative Name:	BMPRIA/ALK-3 (BMPR1A Products)
Background:	Background: Activin receptor-Like Kinase 3 (ALK-3), also known as Bone Morphogenetic Protein Receptor, type IA (BMPR1A), is a type I receptor for bone morphogenetic proteins (BMPs) which belong to the transforming growth factor beta (TGF-β) superfamily. The BMP receptors form a subfamily of transmembrane serine/threonine kinases including the type I receptors BMPR1A and BMPR1B and the type II receptor BMPR2. ALK-3/BMPR1A is expressed in the epithelium during branching morphogenesis. Deletion of BMPR1A in the epithelium with an Sftpc-cre transgene leads to dramatic defects in lung development. ALK-3 and ALK-6 share a high degree of homology, yet possess distinct signaling roles. The transforming growth factor (TGF)-beta type III receptor (TbetaRIII) enhanced both ALK-3 and ALK-6 signaling. TbetaRIII associated with ALK-3 primarily through their extracellular domains, whereas its interaction with ALK-6 required both the extracellular and cytoplasmic domains. ALK-3 plays an essential role in the formation of embryonic ventral abdominal wall, and abrogation of BMP signaling activity due to gene mutations in its signaling components could be one of the underlying causes of omphalocele at birth. The type IA BMP receptor, ALK-3 was specifically required at mid-gestation for normal development of the trabeculae, compact myocardium, interventricular septum, and endocardial cushion. Cardiac muscle lacking ALK-3 was specifically deficient in expressing TGFbeta2, an established paracrine mediator of cushion morphogenesis. Hence, ALK-3 is essential, beyond just the egg cylinder stage, for myocyte-dependent functions and signals in cardiac organogenesis. Synonym: ALK-3;Bone morphogenetic protein receptor type-1A;BMP type-1A receptor;BMPR-1A;Activin receptor-like kinase 3;BMP-2/BMP-4 receptor;Serine/threonine-protein kinase receptor R5;SKR5;CD292;Acvrlk3;Bmpr;BMPR-IA
Molecular Weight:	42 kDa
NCBI Accession:	NP_033888
Pathways:	Stem Cell Maintenance

Application Details

Restrictions:	For Research Use only

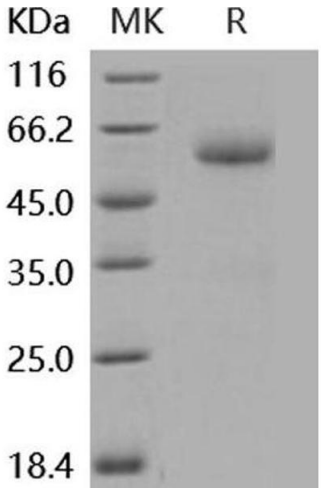
Handling

Format:	Lyophilized
Reconstitution:	Please refer to the printed manual for detailed information.

Handling

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.

Images



Western Blotting

Image 1.