

Mouse ALK-6 / BMPR1B Protein (Fc Tag)

Catalog Number: 50004-M02H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

Acvrlk6; Al385617; ALK-6; Alk6; AV355320; BMPR-1B; BMPR-IB; CFK-43a; SKR6

Protein Construction:

A DNA sequence encoding the mouse Bmpr1b (NP_031586.1) (Lys14-Lys126) was expressed with the Fc region of human IgG1 at the C-terminus.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to inhibit BMP4-induced alkaline phosphatase production by MC3T3E1 mouse preosteoblast cells. The ED_{50} for this effect is 1.5-7.5 μ g/mL.

Endotoxin:

< 1.0 EU per μ g protein as determined by the LAL method.

Predicted N terminal: Lys 14

Molecular Mass:

The recombinant mouse Bmpr1b consists 351 amino acids and predicts a molecular mass of 39.4 kDa.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

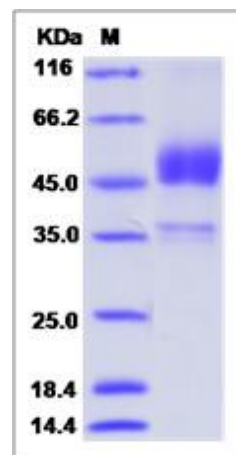
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

BMPR1B (bone morphogenetic protein receptor, type IB), also known as ALK6, is a member of the bone morphogenetic protein (BMP) receptor family. BMPs are involved in endochondral bone formation and embryogenesis. These proteins transduce their signals through the formation of heteromeric complexes of 2 different types of serine (threonine) kinase receptors: type I receptors of about 5-55 kD and type II receptors of about 7-8 kD. Type II receptors bind ligands in the absence of type I receptors, but they require their respective type I receptors for signaling, whereas type I receptors require their respective type II receptors for ligand binding. BMPR1B is the major transducer of signals in precartilaginous condensations as demonstrated in experiments using constitutively active BMPR1B receptors. BMPR1B is a more effective transducer of GDF5 than BMPR1A. Unlike BMPR1A null mice, which die at an early embryonic stage, BMPR1B null mice are viable.

References

1. Ide H, et al. (1998) Assignment of the BMPR1A and BMPR1B genes to human chromosome 10q22.3 and 4q23-q24 by in situ hybridization and radiation hybrid map ping. Cytogenet. Cell Genet. 81(3-4): 285-6.
2. Mishina Y, et al. (2004) Bone morphogenetic protein type IA receptor signaling regulates postnatal osteoblast function and bone remodeling. J Biol Chem. 279(26): 27560-6.
3. Yoon BS, et al. (2005) Bmpr1a and Bmpr1b have overlapping functions and are essential for chondrogenesis in vivo. Proc Natl Acad Sci. 102(14): 5062-7.

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