

Rat ACVR1B / ALK-4 Protein (Fc Tag)

Catalog Number: 80137-R02H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

ACVR1B, Acvrlk4, Alk4

Protein Construction:

A DNA sequence encoding the rat ACVR1B (Met1-Glu126) was expressed with the Fc region of human IgG1 at the C-terminus.

Source: Rat

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-Activity

Measured by its ability to bind with rat TDGF1-His (Cat:80135-R08H) in a functional ELISA.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ser 24

Molecular Mass:

The recombinant rat ACVR1B/Fc is a disulfide-linked homodimer. The reduced monomer comprises 344 amino acids and has a predicted molecular mass of 38.4 kDa. The apparent molecular mass of the protein is approximately 42 and 34 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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

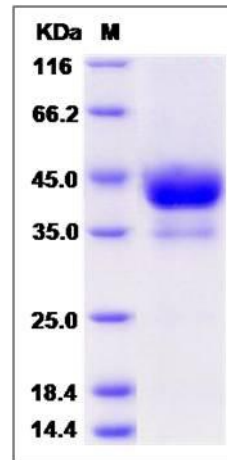
Usage Guide

Storage:

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.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Activin receptor type-IB, also known as Serine/threonine-protein kinase receptor R2, Activin receptor-like kinase 4, ALK-4, and ACVR1B, is a single-pass type I? membrane protein which belongs to the?protein kinase superfamily and?TGFB receptor subfamily. Activins are dimeric growth and differentiation factors which belong to the transforming growth factor-beta (TGF-beta) superfamily of structurally related signaling proteins. Activins signal through a heteromeric complex of receptor serine kinases which include at least two type I? (I and IB) and two type I?I (II and IIB) receptors. These receptors are all transmembrane proteins, composed of a ligand-binding extracellular domain with a cysteine-rich region, a transmembrane domain, and a cytoplasmic domain with predicted serine/threonine specificity. ALK-4 is expressed in many tissues, most strongly in kidney, pancreas, brain, lung, and liver. ALK4 and ALK7 can mediate signal transduction by Nodal proteins, although ALK7 appears to be a receptor more specifically dedicated to Nodal signaling.

References

1. Reissmann E. et al., 2001, Genes Dev. 15 (15): 2010-22.
2. Su GH. et al., 2001, Proc Natl Acad Sci . 98 (6): 3254-7.
3. Inman GJ. et al., 2002, Mol. Pharmacol. 62 (1): 65-74.
4. Harrison CA. et al., 2003, J. Biol. Chem. 278 (23): 21129-35.

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