

Human ALK4 / ACVR1B Protein (His & Fc Tag)

Catalog Number: 10583-H03H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

ACTRIB, ACVRLK4, ALK4, SKR2, ACVR1B

Protein Construction:

A DNA sequence encoding the human ACVR1B (NP_004293.1) extracellular domain (Met 1-Glu 126) was fused with C-terminal His-tagged Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 80 % as determined by SDS-PAGE

Bio-Activity

Measured by its binding ability in a functional ELISA . Immobilized human TDGF1 at 2 µg/ml (100 µl/well) can bind human ALK-4 with a linear range of 0.0068-0.16 µg/ml.

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 human ALK4/Fc is a disulfide-linked homodimer. The reduced monomer consists of 351 amino acids and has a predicted molecular mass of 39.6 kDa. In SDS-PAGE under reducing conditions, rhALK4/Fc monomer migrates as an approximately 46 kDa band due to glycosylation, with ~15% free Fc fragment.

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.

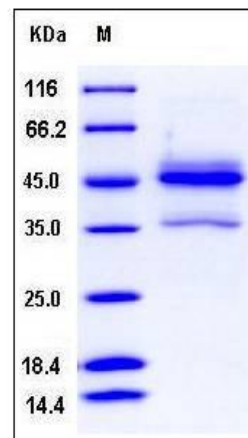
Usage Guide

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 TGFβ 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 II (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 USA. 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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