Human ACVR2B / ActivinR-IIB Protein (Fc Tag)

Catalog Number: 10229-H02H

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

ACVR2B, ACTRIIB, ActR-IIB, MGC116908

Protein Construction:

A DNA sequence encoding the N-terminal segment (Met 1-Thr 134) from the extracellular domain of human ACVR2B (NP_001097.2) was expressed with the fused human IgG1 Fc region at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio-Activity

1. Measured by its ability to neutralize Activin-mediated inhibition on MPC11 cell proliferation. The ED50 for this effect is typically 0.02-0.1 μg/mL in the presence of 10 ng/mL recombinant Activin A.
2. Measured by its binding ability in a functional ELISA.
3. Immobilized human ACVR2B (Cat:10229-H02H) at 10 μg/mL (100 μl/well) can bind biotinylated human INHBA-His (Cat:10429-H08H), The EC50 of biotinylated human INHBA-His (Cat:10429-H08H) is 0.112 μg/mL.
4. Immobilized human ACVR2B (Cat:10229-H02H) at 10 μg/mL (100 μl/well) can bind biotinylated mouse INHBA-His (Cat:Cat:50659-M08H), The EC50 of biotinylated mouse INHBA-His (Cat:Cat:50659-M08H) is 0.161 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 ℃

Predicted N terminal: Ser 19

Molecular Mass:

The recombinant human ACVR2B/Fc chimera is a disulfide-linked homodimer generated after removal of the signal peptide. The reduced monomer comprises 354 amino acids and predicts a molecular mass of 40.0 kDa. As a result of glycosylation, the monomer migrates as an approximately 60-65 kDa protein 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.

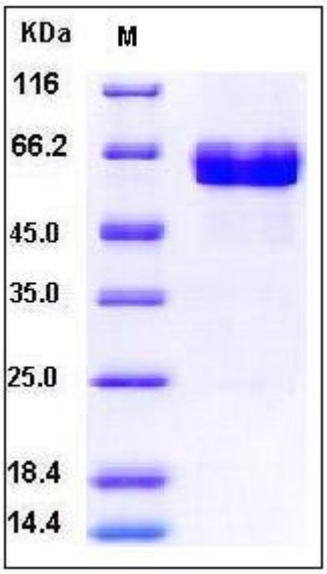
Usage Guide

Storage:

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

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitutio e products.

Protein Description

Activin isoforms are dimeric growth and differentiation factors which belong to the transforming growth factor-beta (TGF-β) superfamily of structurally related signaling proteins. Activins exert their biological actions by binding to heteromeric receptor complexes consisting of at least two type I (I and IB) and two type II (II and IIB) receptor. These Activin receptors are all transmembrane proteins, composed of a ligand-binding extracellular domain with cysteine-rich region, a transmembrane domain, and a cytoplasmic domain with predicted serine/threonine kinase activity. Type I receptors are essential for signal transduction and type II receptors are required for ligand binding and the expression of type I receptors. On ligand binding, Type I and II receptors form a stable complex, resulting in phosphorylation of type I receptors by type II receptors with constitutive kinase activity, and subsequently the activation of downstream molecules including the endogenous Smads is initiated. This protein, activin A type IIB receptor, displays a 3- to 4-fold higher affinity for the ligand than activin A type II receptor.

References

1. Attisano, L. et al., 1996, Mol. Cell. Biol. 16: 1066-1073.
2. Hilden, K. et al., 1994, Blood, 83: 2163-2170.
3. Persson, U. et al., 1997, J.Biol.Chem. 272: 21187-21194.