

Mouse ACTRIIB / ACVR2B Protein (His Tag)

Catalog Number: 50173-M08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

ActRIIB, ACVR2B, MGC118477

Protein Construction:

A DNA sequence encoding the extracellular domain of mouse ACTRIIB (NP_031423.1) (Met 1-Thr 134) was fused with a polyhistidine tag at the C-terminus.

Source: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 94 % as determined by SDS-PAGE

Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized human ACVR2B (Cat:10229-H02H) at 10 µg/mL (100 µl/well) can bind biotinylated mouse INHBA-His (Cat:50659-M08H). The EC50 of biotinylated mouse INHBA-His (Cat:50659-M08H) is 0.161 µg/mL.
2. Measured by its binding ability in a functional ELISA. Immobilized mouse INHBA-his at 10 µg/mL (100 µl/well) can bind human Follistatin Protein. The EC50 of human Follistatin Protein is 0.39 µg/mL.
3. Measured by its ability to neutralize Activin-mediated inhibition on MPC11 cell proliferation. The ED50 for this effect is typically 0.2-0.8 µg/mL in the presence of 10 ng/mL recombinant Activin A.

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 I9

Molecular Mass:

The recombinant mouse ACTRIIB/ACVR2B comprises 127 amino acids and has a predicted molecular mass of 14.8 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rmACVR2B is approximately 33-37 kDa due to glycosylation.

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.

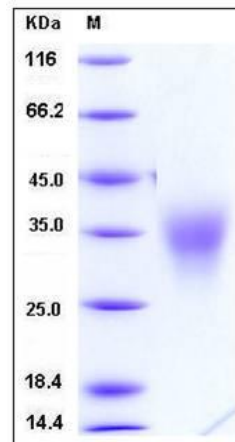
Usage Guide

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 A receptor, type I IB, also known as ACVR2B, is an activin type 2 receptor. Activins are dimeric growth and differentiation factors belonging to the TGF-beta superfamily. 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. Mouse ACVR2B is a transmembrane proteins consisting of a ligand-binding extracellular domain with cysteine-rich region, a transmembrane segment, a cytoplasmic domain with predicted serine/threonine specificity, and as well as a C-terminal PDZ binding motif. Mouse ACVR2B shares 99% aa sequence identity with human and rat within ECD. Type I receptors are essential for signaling, and type I receptors are required for binding ligands and for 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 initiates activation of downstream molecules. The activin A type I IB receptor displays a 3- to 4-fold higher affinity for the ligand than the type I I receptor.

References

1. Hilden, K. et al., 1994, Blood, 83: 2163-70.
2. Persson, U. et al., 1997, J.Biol.Chem. 272: 21187-94.
3. Manova, K. et al., 1995, Mech. Dev. 1995, 49: 3-11.
4. Matzuk, MM. et al., 1992, Biochem.Biophys.Res.Commun.185: 404-13.

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