

Mouse ACTRIIB / ACVR2B Protein (His Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 50173-M08H

General Information

Gene Name Synonym:

4930516B21Rik; ActRIIB

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: HEK293 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, 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

Storage:

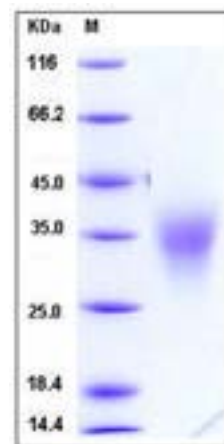
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

ACVR2A and ACVR2B are two activin type II receptors. ACVR2B is integral to the activin and myostatin signaling pathway. Ligands such as activin and myostatin bind to ACVR2A and ACVR2B. Myostatin, a negative regulator of skeletal muscle growth, is regarded as a potential therapeutic target and binds to ACVR2B effectively, and to a lesser extent, to ACVR2A. The structure of human ACVR2B kinase domain in complex with adenine establishes the conserved bilobal architecture consistent with all other catalytic kinase domains. Haplotype structure at the ACVR2B and follistatin loci may contribute to interindividual variation in skeletal muscle mass and strength. Defects in ACVR2B are a cause of left-right axis malformations.

References

1.Kosaki R, *et al.* (1999) Left-right axis malformations associated with mutations in ACVR2B, the gene for human activin receptor type IIB. *Am J Med Genet.* 82(1):70-6. 2.Dupont S, *et al.* (2001) No evidence for linkage or for diabetes-associated mutations in the activin type 2B receptor gene (ACVR2B) in French patients with mature-onset diabetes of the young or type 2 diabetes. *Diabetes* 50(5):1219-21. 3.Albertson RC, *et al.* (2005) Zebrafish *acvr2a* and *acvr2b* exhibit distinct roles in craniofacial development. *Developmental dynamics* 233(4): 1405-18.

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