

Human ACVR2 / ACTRII / ACVR2A Protein (Fc Tag)

Catalog Number: 10257-H02H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

ACVR2A, ACTRII, ACVR2

Protein Construction:

A DNA sequence encoding the N-terminal segment (Met 1-Pro 134) from the extracellular domain of human ACVR2A (NP_001607.1) was fused with the Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio-Activity

Measured by its ability to neutralize Activin-mediated inhibition on MPC11 cell proliferation.

The ED50 for this effect is typically 10-40 ng/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: Ala 20

Molecular Mass:

The recombinant human ACVR2A/Fc chimera is a disulfide-linked homodimer protein generated after removal of the signal peptide. The monomer comprises 352 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.

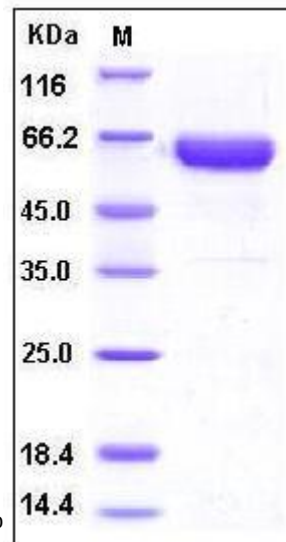
Usage Guide

Storage:

Store it under sterile conditions at -20°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

h the products.

Protein Description

Activin isoforms which belong to the transforming growth factor-beta (TGF-β) superfamily exert their biological actions by binding to heteromeric receptor complexes consisting of at least a type I and a type II receptor of serine/threonine kinase. 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 serine/threonine kinase. 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 initiates the activation of downstream molecules including the endogenous Smads. Several type II activin receptors have been identified and bind to different activins with different affinities. Besides, this type II activin receptor also binds to inhibin, BMP-2 and BMP-7 with lower affinities.

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.
4. Rosenzweig, B.L. 1995, Proc. Natl. Acad. Sci. 92: 7632-7636.

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