

Human ACVR2 / ACTRII / ACVR2A Protein (Fc Tag)

Catalog Number: 10257-H02H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

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: HEK293 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 20-80 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, 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:

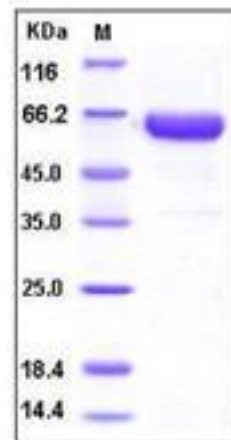
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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. ACVR2A has been shown to interact with INHBA, SYNJ2BP and ACVR1B. The bovine ACVR2A gene encodes a protein of 513 amino acids which is highly homologous (approximately 98% identity) to the rat, mouse, and human ACVR2A proteins. Inactivation of ACVR2A is a common event in prostate cancer cells suggesting it may play an important role in the development of prostate cancer. The ACVR2A gene is a putative tumor suppressor gene that is frequently mutated in microsatellite-unstable colon cancers (MSI-H colon cancers). Frameshift mutation of ACVR2A may contribute to MSI-H colon tumorigenesis via disruption of alternate TGF-beta effector pathways.

References

1. Albertson RC, *et al.* (2005) Zebrafish *acvr2a* and *acvr2b* exhibit distinct roles in craniofacial development. *Developmental dynamics* 233(4): 1405-18.
2. Chung H, *et al.* (2008) Mutation rates of TGFBR2 and ACVR2 coding microsatellites in human cells with defective DNA mismatch repair. *PloS one* 3(10): e3463.
3. Fitzpatrick E, *et al.* (2009) Genetic association of the activin A receptor gene (ACVR2A) and pre-eclampsia. *Molecular human reproduction* 15(3):195-204.

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