

# Human ACVR2 / ACTRII / ACVR2A Protein (His Tag)

Catalog Number: 10257-H08H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

ACTRII; ACVR2

### Protein Construction:

A DNA sequence encoding the extracellular domain of human ACVR2A (NP\_001607.1) (Met 1-Pro 134) was expressed, with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** ≥ 97 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.

### Bio Activity:

**Measured by its ability to neutralize Activin-mediated inhibition on MPC11 cell proliferation. The ED<sub>50</sub> for this effect is typically 0.4-3 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:** Ala 20

### Molecular Mass:

The recombinant human ACVR2A comprises 126 amino acids and predicts a molecular mass of 14.9 kDa. As a result of glycosylation, the apparent molecular mass of the protein is approximately 35-40 kDa 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:

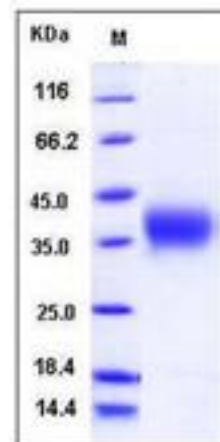
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**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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