



## Synonym

ACVR2B,ACTRIIB,MGC116908

## Source

Human Activin RIIB, His Tag(ACB-H5226) is expressed from human 293 cells (HEK293). It contains AA Ser 19 - Thr 137 (Accession # [Q13705-1](#)).

Predicted N-terminus: Ser 19

## Molecular Characterization

ACVR2B(Ser 19 - Thr 137)  
Q13705-1

Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 14.5 kDa. The protein migrates as 20-35 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per µg by the LAL method.

## Purity

>90% as determined by SDS-PAGE.

## Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

## Storage

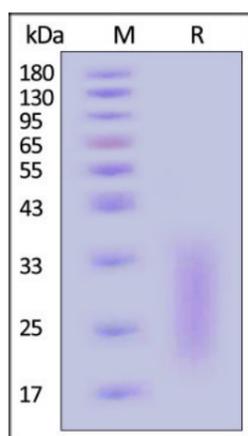
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



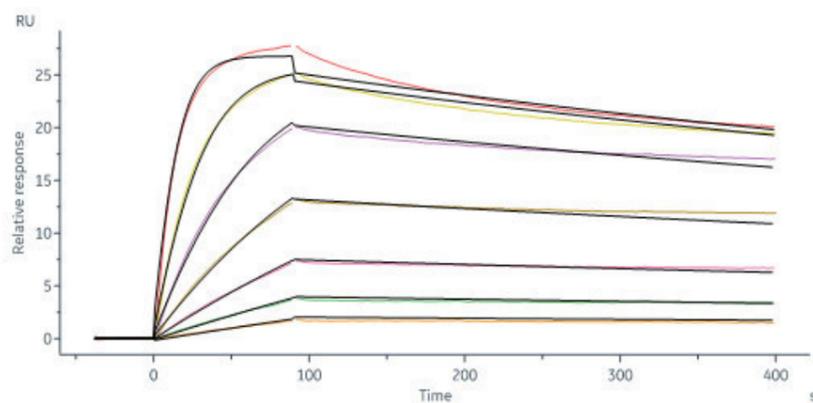
Human Activin RIIB, His Tag on SDS-PAGE under reducing (R) condition.

The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

## Bioactivity-SPR

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Human Activin RIIB, His Tag (Cat. No. ACB-H5226) immobilized on CM5 Chip can bind Human Activin A, premium grade (Cat. No. ACA-H421b) with an affinity constant of 0.216 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

## Background

Activin receptor type-2B (ACVR2B) is also known as ActR-IIB and MGC116908, ACVR2B is an activin type 2 receptor. Activins are dimeric growth and differentiation factors which belong to the transforming growth factor-beta (TGF-beta) superfamily of structurally related signaling proteins. 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. These receptors are all transmembrane proteins, composed of a ligand-binding extracellular domain with cysteine-rich region, a transmembrane domain, and a cytoplasmic domain with predicted serine/threonine specificity. Type I receptors are essential for signaling; and type II receptors are required for binding ligands and for expression of type I receptors. Type I and II receptors form a stable complex after ligand binding, resulting in phosphorylation of type I receptors by type II receptors. Type II receptors are considered to be constitutively active kinases. This gene encodes activin A type IIB receptor, which displays a 3- to 4-fold higher affinity for the ligand than activin A type II receptor. Defects in ACVR2B are the cause of visceral heterotaxy autosomal type 4 (HTX4).

## Clinical and Translational Updates

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