

### **Synonym**

ACVR1b,ALK4,ACVRLK4,ACTR-IB,SKR2

## Source

Human Activin RIB, His Tag(ACB-H52H4) is expressed from human 293 cells (HEK293). It contains AA Ser 24 - Glu 126 (Accession # P36896-1). Predicted N-terminus: Ser 24

#### **Molecular Characterization**

ACVR1B(Ser 24 - Glu 126) P36896-1

Poly-his

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

The protein has a calculated MW of 13.3 kDa. The protein migrates as 16-22 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

#### **Endotoxin**

Less than 1.0 EU per  $\mu g$  by the LAL method / rFC method.

## **Purity**

>90% as determined by SDS-PAGE.

#### **Formulation**

Lyophilized from 0.22  $\mu m$  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

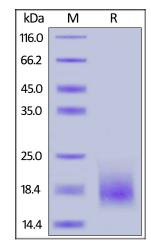
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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**



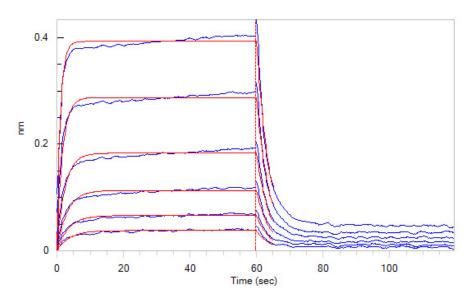
Human Activin RIB, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

## **Bioactivity-BLI**

# Human Activin RIB / ACVR1B Protein, His Tag

Catalog # ACB-H52H4





Loaded Human TDGF1, Fc Tag on Protein A Biosensor, can bind Human Activin RIB, His Tag (Cat. No. ACB-H52H4) with an affinity constant of 5.6 μM as determined in BLI assay (ForteBio Octet Red96e) (QC Tested).

# Background

Activin receptor type-1B (ACVR1B) is also known as Activin receptor-like kinase 4 (ALK-4), Serine/threonine-protein kinase receptor R2 (SKR2), which belongs to the protein kinase superfamily, TKL Ser/Thr protein kinase family and TGFB receptor subfamily. ACVR1B contains one GS domain and one protein kinase domain. The catalytic activity of ACVR1B is "ATP + [receptor-protein] = ADP + [receptor-protein] phosphate". ACVR1B acts as a transducer of activin or activin like ligands (e.g., inhibin) signals. Activin binds to either ACVR2A or ACVR2B and then forms a complex with ACVR1B. These go on to recruit the R-SMADs SMAD2 or SMAD3. ACVR1B also transduces signals of nodal, GDF-1, and Vg1.