

# Human/Cynomolgus Activin RIIB/ACVR2B Protein, Ultra Low Endotoxin



Cat. No. ARB-HM12B-UL

## Description

<b>Source</b>	Recombinant Human/Cynomolgus Activin RIIB/ACVR2B Protein is expressed from HEK293 with His tag at the C-terminus. It contains Ser19-Thr137 (Human) / Ser40-Thr158 (Cynomolgus).
<b>Accession</b>	Q13705-1(Human) /XP_045242398.1(Cynomolgus)
<b>Molecular Weight</b>	The protein has a predicted MW of 14.75 kDa. Due to glycosylation, the protein migrates to 25-45 kDa based on Bis-Tris PAGE result.
<b>Endotoxin</b>	Less than 0.01 EU per µg by the LAL method.
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE > 95% as determined by HPLC

## Formulation and Storage

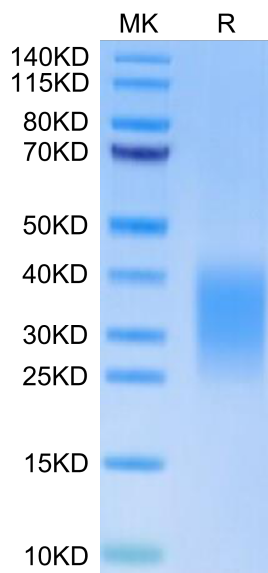
<b>Formulation</b>	Lyophilized from 0.22 µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Dissolve the lyophilized protein in distilled water. Please refer to the Certificate of Analysis for detailed instructions.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

ActRIIB (activin receptor type-2B) is an activin receptor subtype constitutively expressed in the whole body, playing a role in cellular proliferation, differentiation, and metabolism. For its various physiological activities, ActRIIB interacts with activin and multiple other ligands including myostatin (MSTN), growth differentiation factor 11 (GDF11), and bone morphogenetic protein 9 (BMP9).

## Assay Data

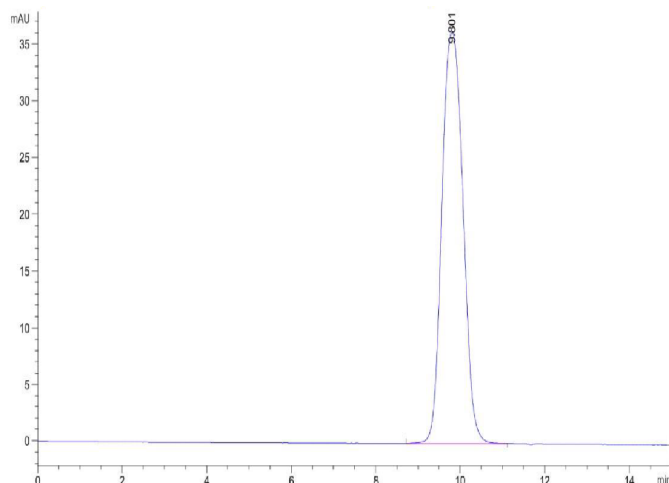
### Bis-Tris PAGE



Human/Cynomolgus Activin RIIB on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC

Assay Data

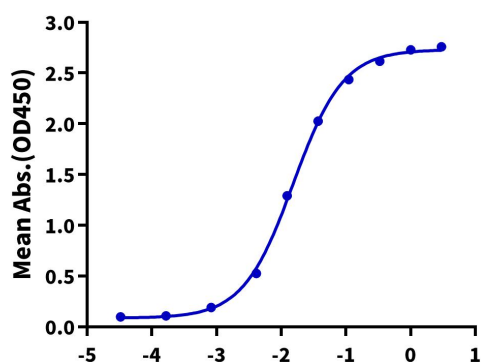


The purity of Human/Cynomolgus Activin RIIB is greater than 95% as determined by SEC-HPLC.

ELISA Data

**Human/Cynomolgus Activin RIIB, His Tag ELISA**

0.1µg Human Activin A, No Tag Per Well

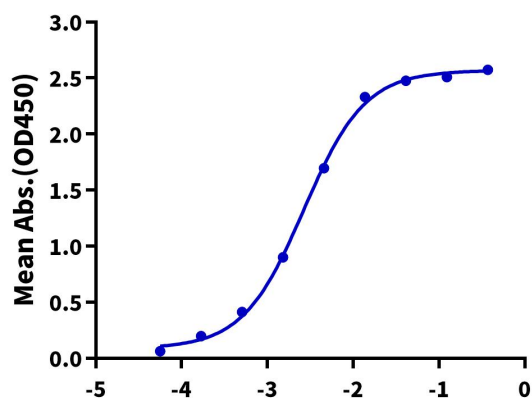


Immobilized Human Activin A, No Tag at 1 µg/ml (100 µl/well) on the plate. Dose response curve for Human/Cynomolgus Activin RIIB, His Tag with the EC50 of 15.3 ng/ml determined by ELISA (QC Test).

Log Human/Cynomolgus Activin RIIB, His Tag Conc.(µg/ml)

**Human/Cynomolgus Activin RIIB, His Tag ELISA**

0.1µg Human/Cynomolgus Activin RIIB, His Tag Per Well



Immobilized Human/Cynomolgus Activin RIIB, His Tag at 1µg/ml (100µl/well) on the plate. Dose response curve for Biotinylated Human GDF-8, Avi Tag with the EC50 of 2.7ng/ml determined by ELISA.

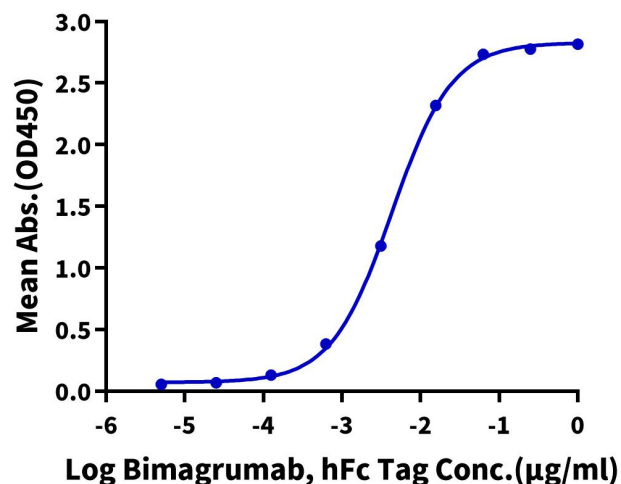
Log Biotinylated Human GDF-8, Avi Tag Conc.(µg/ml)

ELISA Data

Assay Data

**Human/Cynomolgus Activin RIIB, His Tag ELISA**

0.05µg Human/Cynomolgus Activin RIIB, His Tag Per Well

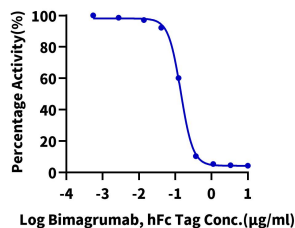


Immobilized Human/Cynomolgus Activin RIIB, His Tag at 0.5 µg/ml (100 µl/well) on the plate. Dose response curve for Bimagrumab with the EC50 of 4.3 ng/ml determined by ELISA.

**Blocking Data**

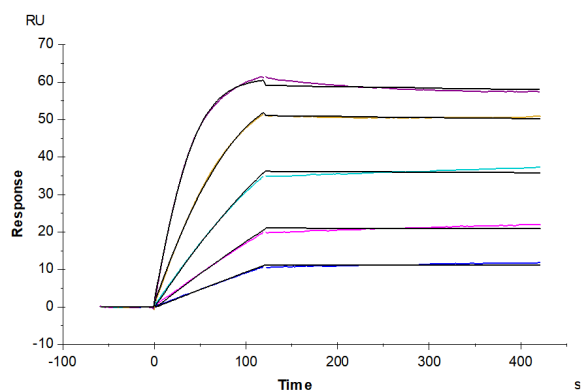
**Inhibition of Human/Cynomolgus Activin RIIB and Biotinylated Activin A Binding**

0.1µg Human/Cynomolgus Activin RIIB, His Tag Per Well



Serial dilutions of Bimagrumab were added into Human/Cynomolgus Activin RIIB, His Tag : Biotinylated Human Activin A, Avi Tag binding reactions. The half maximal inhibitory concentration (IC50) is 0.14µg/ml.

**SPR Data**



Human/Cynomolgus Activin RIIB, His Tag captured on CM5 Chip via anti-his antibody can bind Human Activin A with an affinity constant of 27.92 pM as determined in SPR assay (Biacore T200).