

Biotinylated Mouse Activin RIIB Protein, His,Avitag™ (MALS verified)

Catalog # ACB-M82E3



Synonym

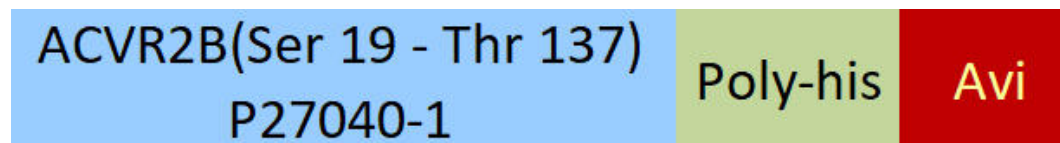
ACVR2B, ACTRIIB, MGC116908

Source

Biotinylated Mouse Activin RIIB Protein, His,Avitag (ACB-M82E3) is expressed from human 293 cells (HEK293). It contains AA Ser 19 - Thr 137 (Accession # [P27040-1](#)).

Predicted N-terminus: Ser 19

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 17.3 kDa. The protein migrates as 25-38 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

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.

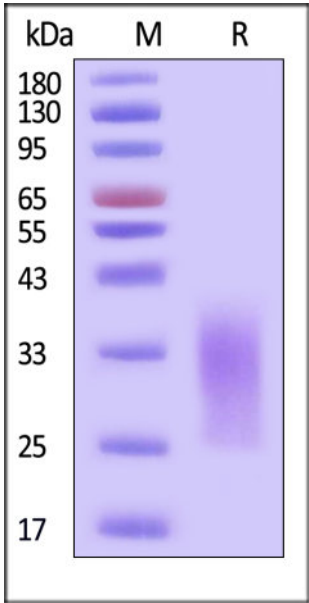
This product is stable after storage at:

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

ACRO Quality Management System

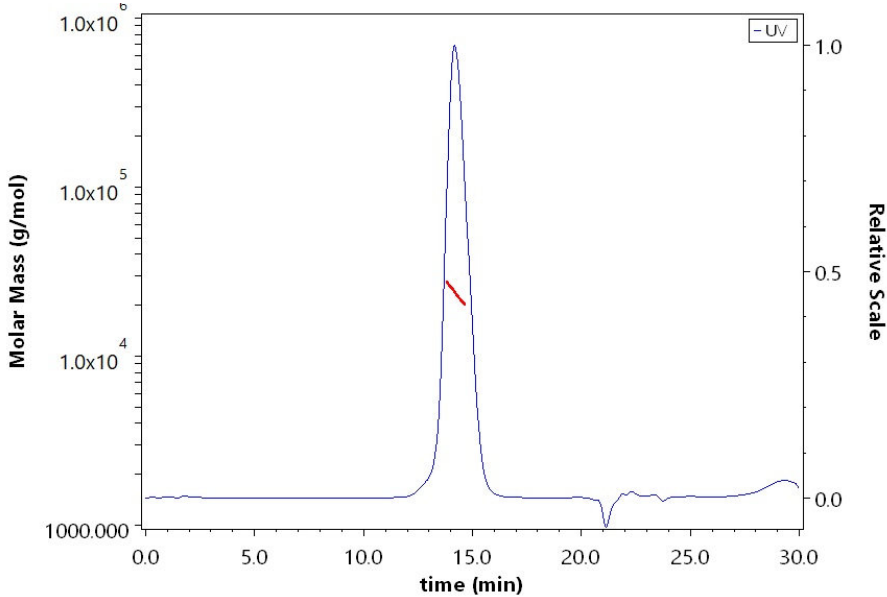
- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



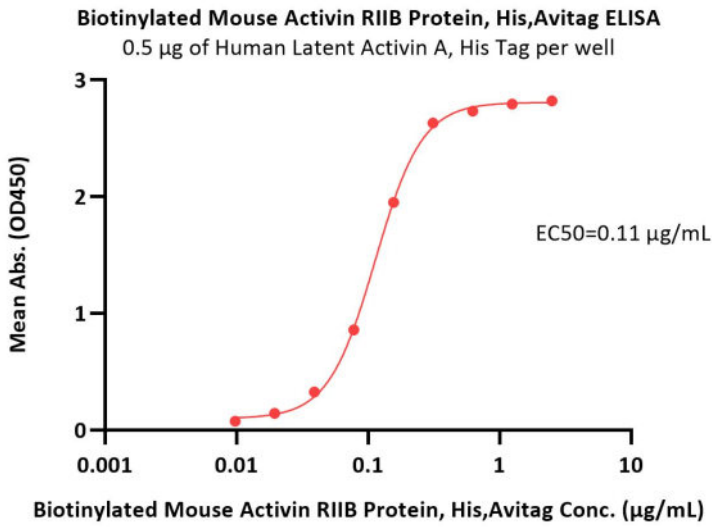
Biotinylated Mouse Activin RIIB Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

SEC-MALS



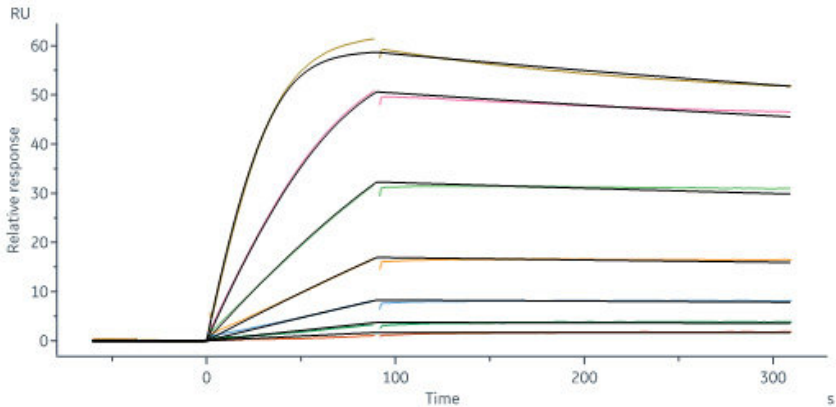
The purity of Biotinylated Mouse Activin RIIB Protein, His,Avitag (Cat. No. ACB-M82E3) is more than 90% and the molecular weight of this protein is around 20-30 kDa verified by SEC-MALS.

Bioactivity-ELISA



Immobilized Human Latent Activin A, His Tag (Cat. No. ACA-H424x) at 5 µg/mL (100 µL/well) can bind Biotinylated Mouse Activin RIIB Protein, His,Avitag (Cat. No. ACB-M82E3) with a linear range of 0.01-0.313 µg/mL (QC tested).

Bioactivity-SPR



Biotinylated Mouse Activin RIIB Protein, His,Avitag (Cat. No. ACB-M82E3) captured on Biotin CAP-Series S Sensor Chip can bind Human Activin A Protein, Tag Free (Cat. No. ACA-H421b) with an affinity constant of 0.106 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).



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