

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

Catalog # ACA-M82E3



Synonym

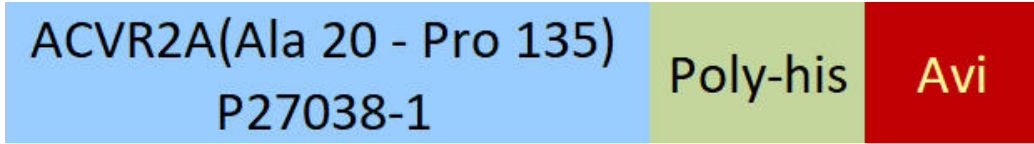
Activin receptor type IIA, ACTRIIA

Source

Biotinylated Mouse Activin RIIA Protein, His,Avitag (ACA-M82E3) is expressed from human 293 cells (HEK293). It contains AA Ala 20 - Pro 135 (Accession # [P27038-1](#)).

Predicted N-terminus: Ala 20

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 17.0 kDa. The protein migrates as 25-35 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.

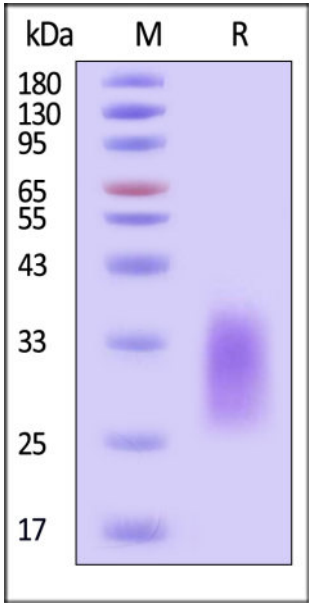
This product is stable after storage at:

- -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

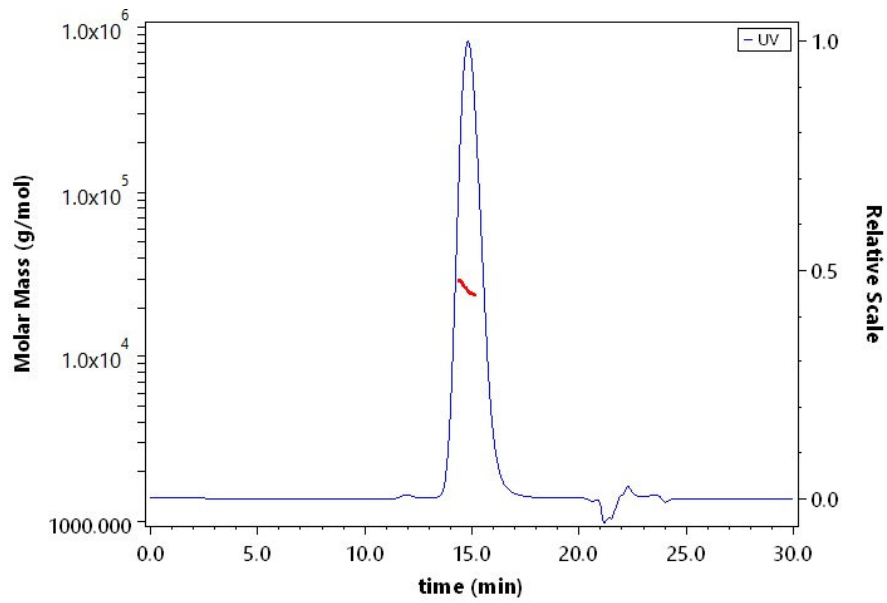
- [QMS\(ISO, GMP\)](#)
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



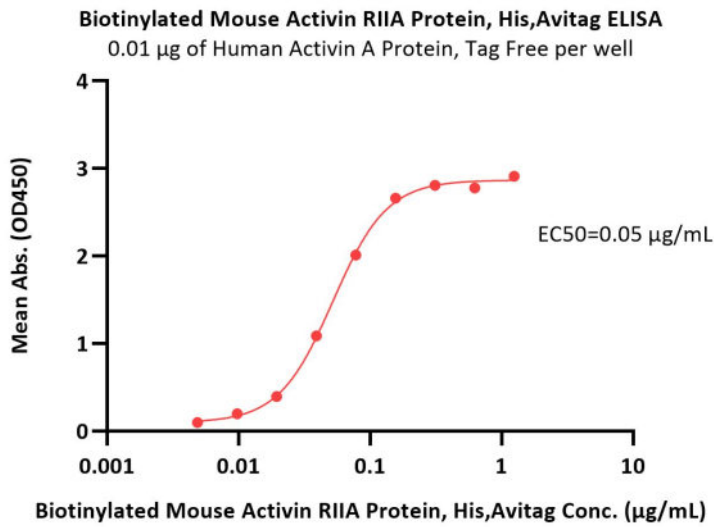
Biotinylated Mouse Activin RIIA Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

SEC-MALS



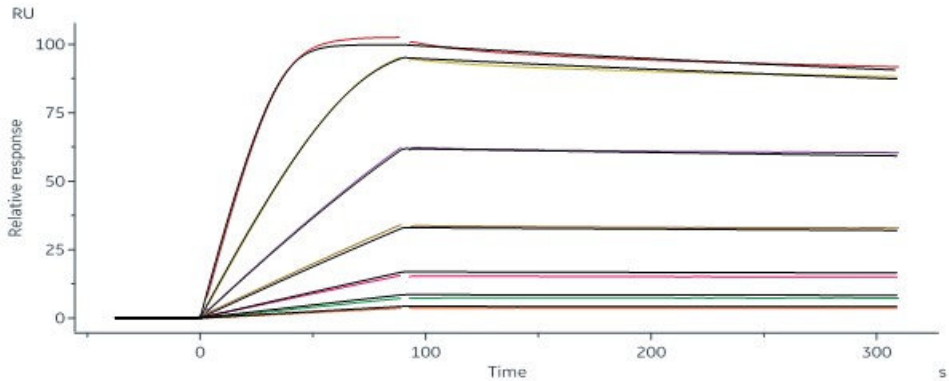
The purity of Biotinylated Mouse Activin RIIA Protein, His,Avitag (Cat. No. ACA-M82E3) is more than 90% and the molecular weight of this protein is around 20-30 kDa verified by SEC-MALS.

Bioactivity-ELISA



Immobilized Human Activin A Protein, Tag Free (Cat. No. ACA-H421b) at 0.1 µg/mL (100 µL/well) can bind Biotinylated Mouse Activin RIIA Protein, His,Avitag (Cat. No. ACA-M82E3) with a linear range of 0.005-0.078 µg/mL (QC tested).

Bioactivity-SPR



Biotinylated Mouse Activin RIIA Protein, His,Avitag (Cat. No. ACA-M82E3) immobilized on SA Chip can bind Human Activin A Protein, Tag Free (Cat. No. ACA H421b) with an affinity constant of 0.17 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

Activin receptor type-2A (ACVR2A) is also known as activin receptor type IIA, ACTR-IIA, ACTRIIA, and ACVR2, and is a single-pass type I membrane protein. ACVR2A belongs to the protein kinase superfamily, the TKL Ser/Thr protein kinase family, and the TGFB receptor subfamily. Upon ligand binding, ACVR2A forms a receptor complex consisting of two type II and two type I transmembrane serine/threonine kinases. Type II receptors phosphorylate and activate type I receptors, which then phosphorylate and activate SMAD transcriptional regulators. ACVR2A also serves as a receptor for activin A, activin B, and inhibin A (the latter in complex with betaglycan). Two type II activin receptors (ACVR2A and ACVR2B) have been identified, which bind different activins with distinct affinities.



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