

Human/Mouse/Rat Activin A Protein



Cat. No. ACV-HM001

Description	
Source	Recombinant Human/Mouse/Rat Activin A Protein is expressed from HEK293 without tag. It contains Gly311-Ser426.
Accession	P08476
Molecular Weight	The protein has a predicted MW of 12.97 kDa. Due to glycosylation, the protein migrates to 14-15 kDa under reduced (R) condition, and 23-25 kDa under Non reducing (N) condition based on Bis-Tris PAGE result.
Endotoxin	Less than 0.1EU per µg by the LAL method.
Purity	> 95% as determined by Bis-Tris PAGE

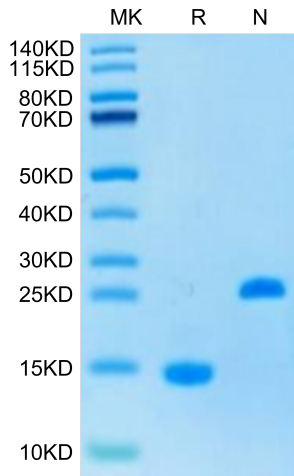
Formulation and Storage	
Formulation	Lyophilized from 0.22µm filtered solution in 4mM HCl. Normally 8% trehalose is added as protectant before lyophilization.
Reconstitution	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 µg/ml is recommended. Dissolve the lyophilized protein in 4mM HCl.
Storage	-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

Activin-A, a member of the TGF-β superfamily, Extensive research over the past decades illuminated fundamental roles for activin-A in essential biologic processes, including embryonic development, stem cell maintenance and differentiation, haematopoiesis, cell proliferation and tissue fibrosis. Activin-A signals through two type I and two type II receptors which, upon ligand binding, activate their kinase activity, phosphorylate the SMAD2 and 3 intracellular signaling mediators that form a complex with SMAD4, translocate to the nucleus and activate or silence gene expression.

Assay Data

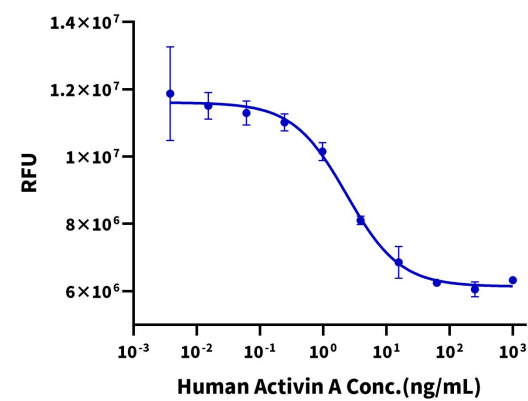
Bis-Tris PAGE



Human/Mouse/Rat Activin A on Bis-Tris PAGE under reduced (R) condition and Non reducing (N) condition. The purity is greater than 95%.

Cell Based Assay

Recombinant Human Activin A Bioactivity

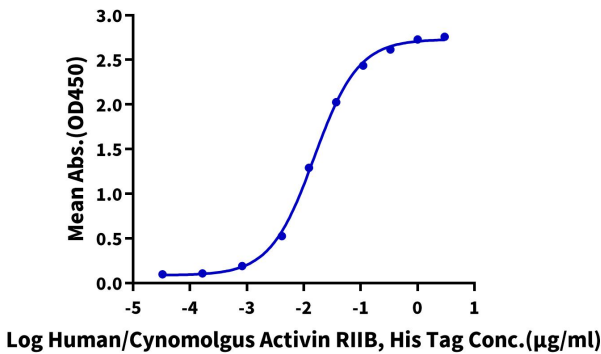


Measured by its ability to inhibit proliferation of MPC-11 cells. The ED50 for this effect is < 7 ng/mL (QC Test).

Assay Data

ELISA Data

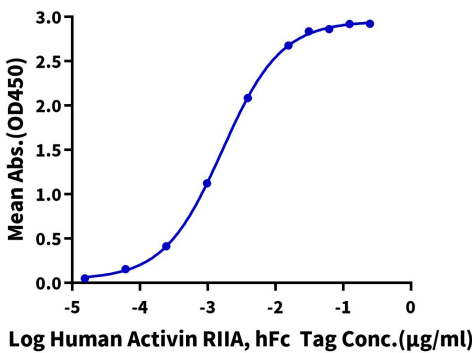
Human Activin A, No Tag ELISA
0.1µg Human Activin A, No Tag Per Well



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

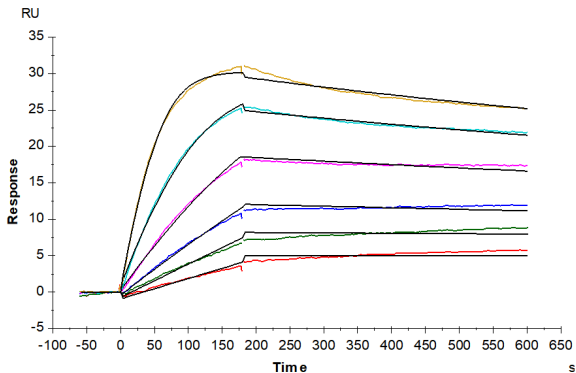
ELISA Data

Human Activin A, No Tag ELISA
0.1µg Human Activin A, No Tag Per Well



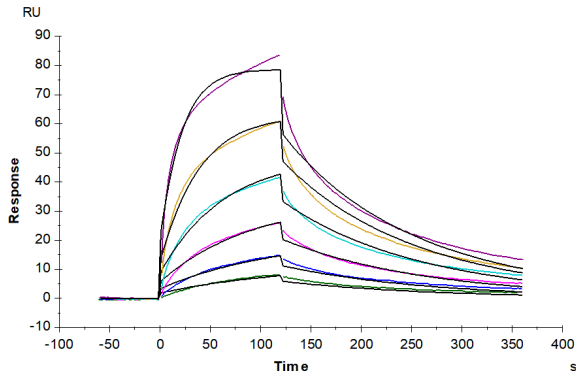
Immobilized Human/Mouse/Rat Activin A, No Tag at 1µg/ml (100µl/well) on the plate. Dose response curve for Human/Cynomolgus Activin RIIA, hFc Tag with the EC50 of 1.6ng/ml determined by ELISA.

SPR Data



Biotinylated Human/Cynomolgus Activin RIIB, His Tag captured on CM5 Chip via Anti-His Antibody can bind Human/Mouse/Rat Activin A, No Tag with an affinity constant of 55.35 pM as determined in SPR assay (Biacore T200).

SPR Data



Human ACVR1B, His Tag captured on CM5 Chip via Anti-His Antibody can bind Human Activin A, No Tag with an affinity constant of 18.43 nM as determined in SPR assay (Biacore T200).