

# Human ACVR1B/Activin RIB Protein

Cat. No. ALK-HM204

## Description

<b>Source</b>	Recombinant Human ACVR1B/Activin RIB Protein is expressed from HEK293 with hFc tag at the C-terminus. It contains Ser24-Glu126.
<b>Accession</b>	P36896-1
<b>Molecular Weight</b>	The protein has a predicted MW of 37.36 kDa. Due to glycosylation, the protein migrates to 45-55 kDa based on Bis-Tris PAGE result.
<b>Endotoxin</b>	Less than 1EU per $\mu\text{g}$ by the LAL method.
<b>Purity</b>	>95% as determined by Bis-Tris PAGE >95% as determined by HPLC

## Formulation and Storage

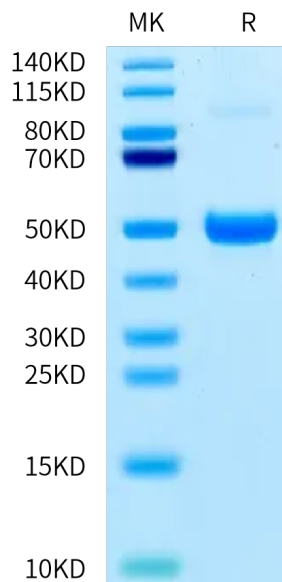
<b>Formulation</b>	Lyophilized from 0.22 $\mu\text{m}$ filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 $\mu\text{g}/\text{ml}$ is recommended. Dissolve the lyophilized protein in distilled water.
<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

Activin A receptor type I (ACVR1) encodes for a bone morphogenetic protein type I receptor of the TGF $\beta$  receptor superfamily. It is involved in a wide variety of biological processes, including bone, heart, cartilage, nervous, and reproductive system development and regulation. Moreover, ACVR1 has been extensively studied for its causal role in fibrodysplasia ossificans progressiva (FOP), a rare genetic disorder characterised by progressive heterotopic ossification. ACVR1 is linked to different pathologies, including cardiac malformations and alterations in the reproductive system.

## Assay Data

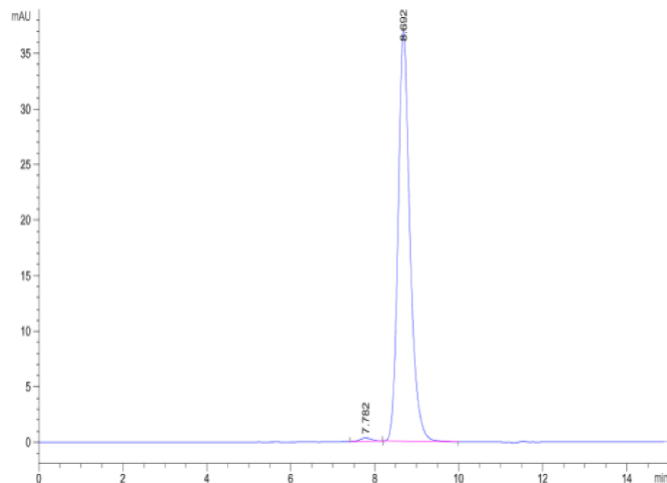
### Bis-Tris PAGE



Human ACVR1B on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

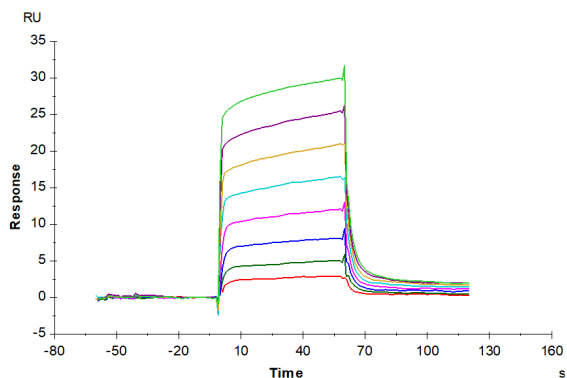
### SEC-HPLC

Assay Data



The purity of Human ACVR1B is greater than 95% as determined by SEC-HPLC.

SPR Data



Human ACVR1B, hFc Tag captured on CM5 Chip via Protein A can bind Human TDGF1, His Tag with an affinity constant of 0.16  $\mu$ M as determined in SPR assay (Biacore T200).