Human ALK-1/ACVRL1 Protein

Cat. No. ALK-HM101

Description

Source	Recombinant Human ALK-1/ACVRL1 Protein is expressed from HEK293 with His tag at the C-Terminus.
	It contains Asp22-Gln118.
Accession	P37023
Molecular Weight	The protein has a predicted MW of 11.5 kDa. Due to glycosylation, the protein migrates to 25-30 kDa based on Bis-Tris PAGE result.
Endotoxin	Less than 1 EU per μg by the LAL method.
Purity	> 95% as determined by Bis-Tris PAGE
	> 95% as determined by HPLC

Formulation and Storage

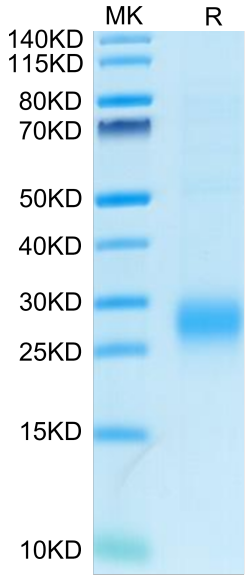
Formulation	Lyophilized from 0.22μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
Reconstitution	Dissolve the lyophilized protein in distilled water. Please refer to the Certificate of Analysis for detailed instructions.
Storage	-20 to -80°C for 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 receptor-like kinase 1 (ALK1)-mediated endothelial cell signalling in response to bone morphogenetic protein 9 (BMP9) and BMP10 is of significant importance in cardiovascular disease and cancer. Structural analyses reveal a tripartite recognition mechanism that defines BMP9 and BMP10 specificity for ALK1, and predict that crossveinless 2 is not an inhibitor of BMP9, which is confirmed by experimental evidence.

Assay Data

Bis-Tris PAGE



Human ALK-1 on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

SEC-HPLC

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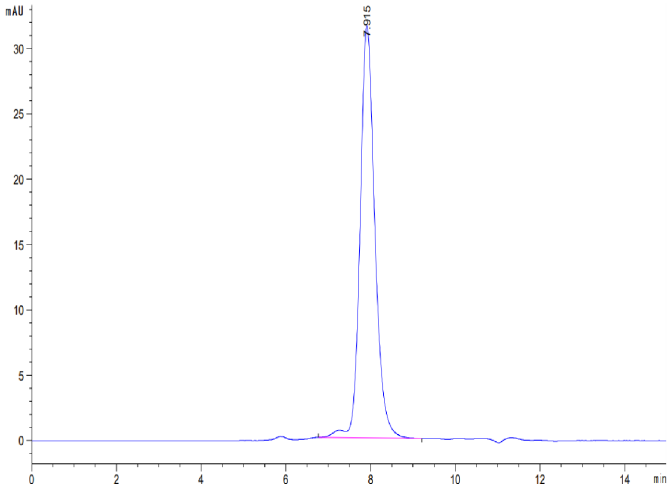
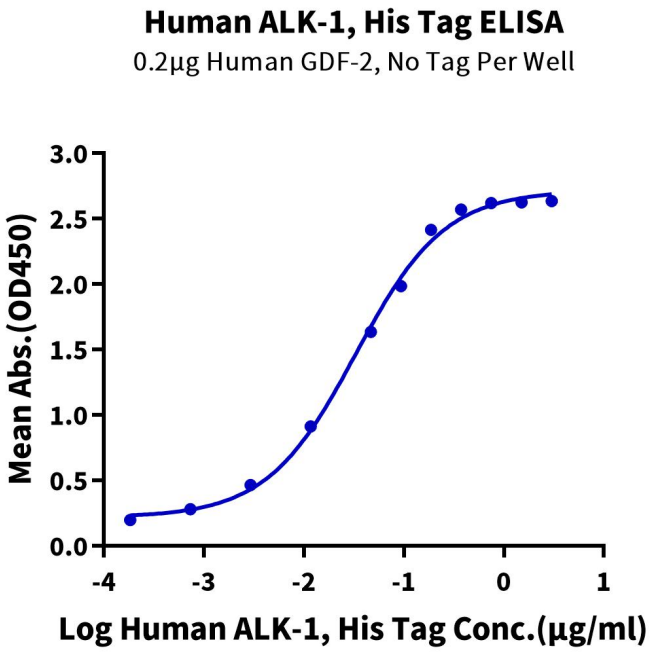
Assay Data



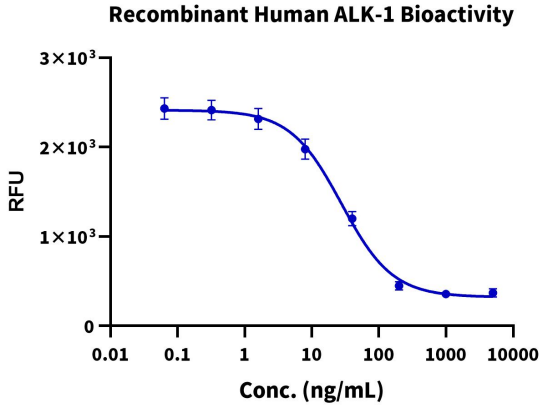
The purity of Human ALK-1 is greater than 95% as determined by SEC-HPLC.

ELISA Data



Immobilized Human GDF-2, No Tag at 2μg/ml (100μl/well) on the plate. Dose response curve for Human ALK-1, His Tag with the EC50 of 33.1ng/ml determined by ELISA (QC Test).

Cell Based Assay



Measured by its ability to inhibit BMP9 induced alkaline phosphatase production by ATDC5 mouse chondrogenic cells. The ED50 for this effect is <50 ng/mL in the presence of 2 ng/mL of recombinant human BMP9 (Cat.GDF-HM002).