

ALK-7 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	ACVRLK7;ALK7;activin A receptor, type IC
Protein Construction:	Glu21-Glu113
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q8NER5-1
Molecular Weight:	35.96 kDa (Predicted); 48-60 kDa (Reducing conditions due to glycosylation)

QC Testing

Biological Activity:	Immobilized Human ALK-7, hFc Tag at 1µg/ml (100µl/well) on the plate. Dose response curve for Biotinylated Anti-ALK-7 Antibody, hFc Tag with the EC50 of 4.1ng/ml determined by ELISA. (QC Test)
Purity:	> 95% as determined by Bis-Tris PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22 µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Arterial stiffness is an important feature of diabetic macrovascular complications. Activin receptor-like kinase 7 (ALK7), a member of type I transforming growth factor-β (TGF-β) receptors, is correlated with pathogenic risks of type 2 diabetes mellitus and cardiovascular diseases and may be involved in cardiovascular remodeling.

Reference

Lin YY,et al. (2012) Functional dissection of lysine deacetylases reveals that HDAC1 and p300 regulate AMPK. Nature. 482(7384):251-5.

He C,et al. (2010) A large-scale candidate gene association study of age at menarche and age at natural menopause. Hum Genet. 128(5):515-27.

Watanabe R,et al. (2008) Insulin gene is a target in activin receptor-like kinase 7 signaling pathway in pancreatic beta-cells. Biochem Biophys Res Commun. 377(3):867-72.

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