

Human ALK-7 / ACVR1C Protein (ECD, Fc Tag)

Catalog Number: 10869-H02H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

ACVRLK7; ALK7

Protein Construction:

A DNA sequence encoding the human ACVR1C (NP_660302.2) (Met1-Glu113) was expressed with the Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE.

Endotoxin:

< 1.0 EU per µg protein as determined by the LAL method.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Leu 22

Molecular Mass:

The recombinant human ACVR1C consists 330 amino acids and predicts a molecular mass of 36.6 kDa.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

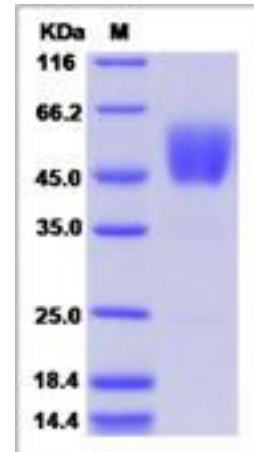
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

ALK-7, also known as ALK7 and ACVR1C, belongs to the ALK family. It is a type I receptor for the TGFβ family of signaling molecules. TGF-β is the prototype of a protein superfamily which, in humans, contains at least 35 members, including activins, inhibins, bone morphogenetic proteins, growth/differentiation factors, and Müllerian inhibiting substance. ALK-7 is a serine-threonine kinase that can cause the activation of one of the SMAD signal transducers, SMAD2. ALK-7 has a ligand known as Nodal. Nodal stimulates the secretion of TIMP-1 and inhibits matrix metalloproteinases MMP-2 and MMP-9 activity. The overexpression of Nodal or constitutively active ALK-7 decreases cell migration and invasion, whereas knock-down of Nodal and ALK-7 has the opposite effects.

References

1. Lin YY, *et al.* (2012) Functional dissection of lysine deacetylases reveals that HDAC1 and p300 regulate AMPK. *Nature*. 482(7384):251-5.
2. 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.
3. 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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