Rhesus ALK-7 / ALK7 / ACVR1C Protein (Fc Tag)

Catalog Number: **90067-C02H**

General Information

Gene Name Synonym:

ACVR1C

Protein Construction:

A DNA sequence encoding the rhesus ACVR1C (NP_001253619.1) (Gly25-Glu113) was expressed with the Fc region of human IgG1 at the C-terminus.

Source: Rhesus

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

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

Stability:

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

Predicted N terminal: Gly 25

Molecular Mass:

The recombinant rhesus comprises 330 amino acids and has a calculated 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:

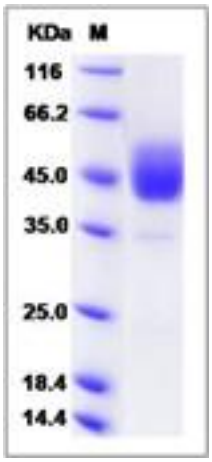
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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 TGFB 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.