

Canine ALK-2 / ACVR1 / ALK2 Protein (Fc Tag)

Catalog Number: 70048-D02H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

ACVR1

Protein Construction:

A DNA sequence encoding the canine ACVR1 (XP_549615.2) (Met1-Glu123) was expressed with the Fc region of human IgG1 at the C-terminus.

Source: Canine

Expression Host: Human Cells

QC Testing

Purity: (32.9+66.0) % 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 °C

Predicted N terminal: Met 21

Molecular Mass:

The recombinant canine ACVR1/Fc is a disulfide-linked homodimer. The reduced monomer comprises 344 amino acids and has a predicted molecular mass of 38.6 kDa. The apparent molecular mass of the protein is approximately 68 and 44 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

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

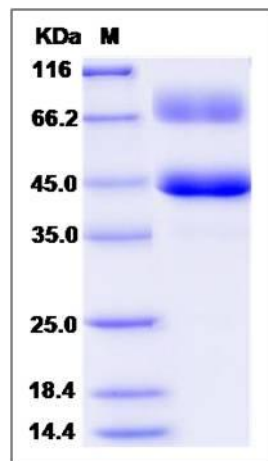
Usage Guide

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.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Cytokines and hormones belonging to the transforming growth factor beta (TGFβ) superfamily such as the activin, anti-müllerian hormone (AMH), bone morphogenetic proteins (BMPs), and Nodal, are involved in a variety of physiological processes including growth, cell differentiation, homeostasis, osteogenesis, and apoptosis. They initiate signaling through heteromeric complexes of a type I? and a type I I serine/threonine kinase receptor. The two type receptors are type I transmembrane proteins and are distinguished by the presence of a glycine/serine-rich juxta-membrane domain found in the type I receptors. Type II receptors are required for binding ligands and recruitment of type I receptors which then form stable complexes, and type I receptors are essential for signaling transduction. ALK2, also termed as ACVR1, ActRI, SKR1, was initially identified as an activin type I receptor because of its ability to bind activin in concert with ActRII or IIB. In addition, ALK2 is also identified as a BMP type I receptor. ACVR1 has been demonstrated to form complex with either the BMP-2/7-bound BMPR-II or ACVR2A/ACVR2B and transduce signals to downstream components R-SMADs. Recombinant soluble ALK2 does not bind activin. Mutations in this gene are associated with fibrodysplasia ossificans progressive.

References

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3. Macias-Silva M. et al., 1998, J Biol Chem. 273: 25628-36.
4. Shore EM. et al., 2006, Nature Genetics. 38: 525-7.
5. Renlund N. et al., 2007, J Endocrinology. 195: 95-103.

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