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Recombinant Mouse ALK-4/ACVR1B Protein

Catalog No.: RP01803 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Mouse	11479	Q61271

Tags
C-hFc

Synonyms
Alk4; SKR2; ALK-4; ActRIB; ActR-IB; Acvrlk4; 6820432J04

Background

ACVR1B (Activin A Receptor, type 1B), belongs to the protein kinase superfamily, TKL Ser/Thr protein kinase family, and TGFB receptor subfamily. ALK-4/ACVR1B acts as a transducer of activin or activin like ligands signals. Activin binds to either ACVR2A or ACVR2B and then forms a complex with ACVR1B. The known type II activin receptors include ActRII and ActRIIB, while the main type I activin receptor in mammalian cells is ALK-4 (ActRIB). In the presence of activin, type II and type I receptors form complexes whereby the type II receptors activate ALK-4 through phosphorylation. The activated ALK-4, in turn, transduces signals downstream by phosphorylation of its effectors, such as Smads, to regulate gene expression and affect cellular phenotype.
ALK-4/ACVR1B is an important regulator of vertebrate development, with roles in mesoderm induction, primitive streak formation, gastrulation, dorsoanterior patterning, and left-right axis determination.

Product Information

Source	Purification
HEK293 cells	> 92% by SDS-PAGE.

Calculated MW	Observed MW
37.30 kDa	45-55 kDa

Endotoxin
< 0.01EU/μg

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Basic Information

Description
Recombinant Mouse ALK-4/ACVR1B Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Met1-Glu126) of mouse ALK-4/ACVR1B (Accession #NP_031421.1) fused with hFC tag at the C-terminus.

Bio-Activity
Measured by its binding ability in a functional ELISA. Immobilized Mouse TDGF1 (Catalog: RP01946) at 5 μg/mL (100 μL/well) can bind Mouse ALK4(Catalog: RP01803) with a linear range of 4.5-133.2 ng/mL.

Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

Contact

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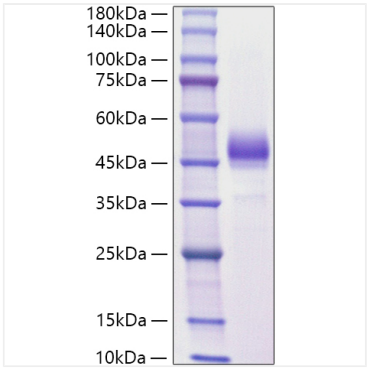
Validation Data



Recombinant Mouse ALK-4/ACVR1B Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 45-60 kDa.