Recombinant Human ALK-4/ACVR1B Protein

Catalog No.: RP00074

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Sequence Information

Species
Human

Gene ID
91

Swiss Prot
P36896-1

Tags
C-hFc&his

Synonyms
ACTRIB, ACVRLK4, ALK4, SKR2, ACVR1B,ACVRLK4,ALK4,SKR2

Product Information

Source
HEK293 cells

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
40.37 kDa

Observed MW
45-50 kDa

Endotoxin
< 0.1 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.Contact us for customized product form or formulation.

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.

Background

ALK-4 (Activin Receptor-Like Kinase 4) or 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.

Basic Information

Description
Recombinant Human ALK-4/ACVR1B Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Met 1-Glu 126) of human ACVR1B (Accession #NP_004293.1) fused with a C-hFc&his at the C-terminus.

Activity
Measured by its binding ability in a functional ELISA. Immobilized Human ACVR1B at 0.5 μg/mL (100 μL/well) can bind Human ACVR2B with a linear range of 2.0-286.1 ng/mL.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

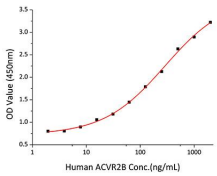
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

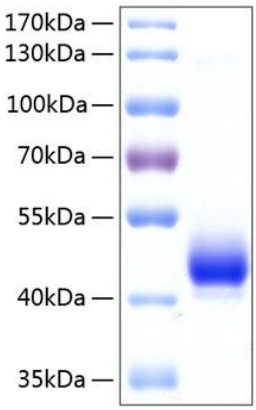
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Validation Data



Immobilized Human ACVR1B at 0.5μg/mL (100 μL/well) can bind Human ACVR2B with a linear range of 2.0-286.1ng/mL.



Recombinant Human ALK-4/ACVR1B Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.