Acvr1
Recombinant Mouse ALK-2 / ACVR1 (His & Fc Tag)

Catalog No.	CRM582A-HisFc CRM582B-HisFc	**Quantity:**	100 µg 200 µg

Alternate Names: Activin receptor type-1, Activin receptor type I, ACTR-I, Serine/threonine-protein kinase receptor R1, SKR1, TGF-B superfamily receptor type I, TSR-I, TSK-7L

Description: Activin receptor type-1 (ALK-2), initially identified as an activin type I receptor because of its ability to bind activin in concert with ActRII or ActRIIB, is also identified as a BMP type I receptor. It has been demonstrated that ALK-2 forms complex with either the BMP-2/7-bound BMPR-II or ACVR2A /ACVR2B. ALK-1 and ALK-2 presenting in the yeast Saccharomyces cerevisiae are two haspin homologues. Both ALK-1 and ALK-2 exhibit a weak auto-kinase activity in vitro, and are phosphoproteins in vivo. ALK-1 and ALK-2 levels peak in mitosis and late-S/G2. Control of protein stability plays a major role in ALK -2 regulation. The half-life of ALK-2 is particularly short in G1. Overexpression of ALK-2, but not of ALK-1, causes a mitotic arrest, which is correlated to the kinase activity of the protein. This suggests a role for ALK-2 in the control of mitosis. Endoglin is phosphorylated on cytosolic domain threonine residues by the TGF-beta type I receptors ALK-2 and ALK-5 in prostate cancer cells. Endoglin did not inhibit cell migration in the presence of constitutively active ALK-2. Defects in ALK-2 are a cause of fibrodysplasia ossificans progressiva (FOP).

UniProt ID: P37172

Accession Number: NP_031420.2

Protein Construction: A DNA sequence encoding the mouse ACVR1 precursor (Met 1-Glu 123) was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus.

Source: HEK293 Cells

Formulation: Lyophilized from sterile PBS, pH 7.4
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.

Molecular Weight: The secreted rmALK-2/Fc is a disulfide-linked homodimer after removal of the signal peptide. The reduced monomer consists of 351 aa with a predicted MW of 40 kDa and migrates at ~45 kDa in reduced SDS-PAGE, due to glycosylation.

Purity: > 90 % as determined by SDS-PAGE.

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

Biological Activity: Measure by its ability to bind with human BMP2 in a functional ELISA.

Predicted N-terminal: Val 21

Reconstitution: **Centrifuge vial prior to opening.** Add sterile distilled water to a concentration of 0.1 mg/mL and gently pipette the solution up and down the sides of the vial.
DO NOT VORTEX. Allow several minutes for complete reconstitution.

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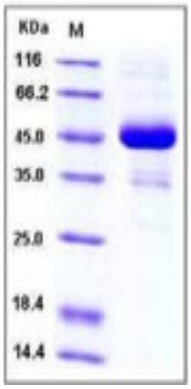
Storage & Stability: Stable for up to 1 year from date of receipt at -20°C to -80°C
After reconstitution, store working aliquots at -20°C to -80°C.
Avoid repeated freeze-thaw cycles.

SDS-PAGE



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