Active Recombinant Human ACVR1B and ACVR2B Protein, Fc Tagged

Cat. No. ACVR1B-11224H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Human Activin RIB & Activin RIIB Protein, Fc Tag&Fc Tag is expressed from human 293 cells (HEK293). It contains AA Gly 25-Glu 126 & Gly 20-Pro 133 (Accession # P36896-1 & Q13705-1).
Species	Human
Source	HEK293
ProteinLength	ACVR1B: 25-126 aa ACVR2B: 20-133 aa
Description	Activins are dimeric growth and differentiation factors which belong to the transforming growth factor-beta (TGF-beta) superfamily of structurally related signaling proteins. Activins signal through a heteromeric complex of receptor serine kinases which include at least two type I (I and IB) and two type II (II and IIB) receptors. These receptors are all transmembrane proteins, composed of a ligand-binding extracellular domain with cysteine-rich region, a transmembrane domain, and a cytoplasmic domain with predicted serine/threonine specificity. Type I receptors are essential for signaling; and type II receptors are required for binding ligands and for expression of type I receptors. Type I and II receptors form a stable complex after ligand binding, resulting in phosphorylation of type I receptors by type II receptors. Type II receptors are considered to be constitutively active kinases. This gene encodes activin A type IIB receptor, which displays a 3- to 4-fold higher affinity for the ligand than activin A type II receptor.

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Form	Lyophilized from 0.22 μm filtered solution in 50 mM Tris, 100 mM Glycine, 25 mM Arginine, 150 mM NaCl, pH7.5 with trehalose as protectant.
Bio-activity	Immobilized Human Activin A Protein, Tag Free at 5 μg/mL (100 μL/well) can bind Human Activin RIB & Activin RIIB Protein, Fc Tag&Fc Tag with a linear range of 0.3-10 ng/mL.
Molecular Mass	Human Activin RIB & Activin RIIB Protein, Fc Tag&Fc Tag is produced by co-expression of Activin RIB and Activin RIIB, has a calculated MW of 37 kDa & 39.1 kDa. Subunit Activin RIB is fused with a human IgG1 Fc tag at the C-terminus and subunit Activin RIIB is fused with a human IgG1 Fc tag at the C-terminus. The protein migrates as 80-95 kDa and >150 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under non-reducing (NR) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 1.0 EU/μg by the LAL method/rFC method.
Purity	>90% as determined by SDS-PAGE.
Storage	This product is stable after storage at: -20 to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution. For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 μg/μL. Centrifuge the vial at 4 centigrade before opening to recover the entire contents.

GENE INFORMATION

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Gene Name	ACVR1B activin A receptor, type IB [Homo sapiens (human)]
Official Symbol	ACVR1B
Synonyms	ACVR1B; activin A receptor, type IB; ACVRLK4; activin receptor type-1B; ActRIB; ALK4; SKR2; activin receptor-like kinase 4; activin A receptor, type II-like kinase 4; serine/threonine-protein kinase receptor R2; ACTRIB;
Gene ID	91
mRNA Refseq	NM_004302
Protein Refseq	NP_004293
MIM	601300
UniProt ID	P36896
Gene Name 2	ACVR2B activin A receptor, type IIB [Homo sapiens (human)]
Official Symbol 2	ACVR2B
Synonyms 2	ACVR2B; activin A receptor, type IIB; activin receptor type-2B; ActR IIB; HTX4; ACTRIIB; ActR-IIB;
Gene ID 2	93
mRNA Refseq 2	NM_001106
Protein Refseq 2	NP_001097

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MIM 2	602730
UniProt ID 2	Q13705

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