

Recombinant Human Activin A Receptor, Type IIB

Cat. No. ACVR2B-1586H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species Human

Source Sf21 Cells

Description

Activin A receptor, type IIB, also known as ACVR2B, is a human gene.[1] ACVR2B is an activin type 2 receptor. 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. Activin type II receptors are highly conserved. Human, mouse and rat type II activin receptors share greater than 98% amino acid sequence homology. Recombinant soluble activin type II receptors bind activin with high affinity, and are potent activin antagonists.

State Of Matter Lyophilized.

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Purity	>95% by SDS Page and analyzed by silver stain.
Endotoxin	<1.0 EU/g as determined by the LAL method.
Molecular Weight	The predicted molecular weight of Recombinant Human Act R-IIB is Mr 41 kDa. However, the actual molecular weight as observed by migration on SDS Page is Mr 55-60 kDa.
Storage And Stability	This lyophilized protein is stable for six to twelve months when stored desiccated at -20°C to -70°C. After aseptic reconstitution, this protein may be stored at 2°C to 8°C for one month or at -20°C to -70°C in a manual defrost freezer. Avoid Repeated Freeze Thaw Cycles.

GENE INFORMATION

Gene Name	ACVR2B activin A receptor, type IIB [Homo sapiens]
Synonyms	ACVR2B; activin A receptor, type IIB; ACTRIIB; ActR-IIB; MGC116908; EC 2.7.11.30; Activin receptor type-2B; ACTR-IIB
Gene ID	93
mRNA Refseq	NM_001106
Protein Refseq	NP_001097
MIM	602730
UniProt ID	Q13705
Chromosome	3p22

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Location	
Pathway	Cytokine-cytokine receptor interaction; TGF-beta signaling pathway; Signaling by BMP
Function	ATP binding; activin binding; activin receptor activity, type II; growth factor binding; manganese ion binding; nucleotide binding; protein serine/threonine/tyrosine kinase activity; transferase activity; receptor activity
PDB rendering based on 1nys. 	