Active Recombinant Human INHBB, Animal Free

Cat. No. INHBB-139H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human Activin B is a 14 KDa betaB single chain, containing 123 amino residues. Human recombinant protein expressed in Nicotiana benthamiana. Recombinant human Activin B contains a 10-His-tag at the N-terminal end, is produced by transient expression in non-transgenic plants and is purified by sequential chromatography (FPLC). This product contains no animal–derived components or impurities. Animal free product.
Species	Human
Source	Nicotiana Benthamiana
ProteinLength	123 a.a.
Description	Activins are homodimers or heterodimers of the various beta subunit isoforms, belonging to the TGF-beta family. Mature Activin B has two chains of 123 amino acids residues (betaB-betaB). Activin exhibits a wide range of biological activities, including mesoderm induction, neural cell differentiation, bone remodelling, haematopoiesis, and reproductive physiology. Activins plays a key role in the production and regulation of hormones such as FSH, LH, GnRH and ACTH. Inhibins/Activins are protein that are formed by the dimerization of two subunits, i. e. an α (alpha) with either beta A (betaA) - Inhibin A or beta B (betaB) - Inhibin B. The subunits betaA and betaB can also form homodimers or heterodimers called Activin: Activin A (betaA -betaA), Activin B (betaB -betaB) and Activin AB (betaA -betaB). The Activin gene family comprises the additional, but poorly characterized members" Activin betaC (betaC), beta D

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	(betaD) and beta E (betaE). As with other members of the super-family, Activins interact with two types of cell surface trans-membrane receptors (Types I and II) which have intrinsic serine/threonine kinase activities in their cytoplasmic domains, Activin type 1 receptors, ACVR1, ACVR1B, ACVR1C and Activin type 2 receptors, ACVR2A, ACVR2B.
Form	Lyophilized from Tris HCl 0.05M buffer at pH 7.4.
Bio-activity	The biological activity of Activin B is measured by its ability to inhibit mouse plasmacytoma cell line (MPC-11) cells proliferation. EC50< 5="" ng/ml="" are="" required="" to="" stimulate="" a="" half-maximal="" response="" at="" cytokine="" saturation.="" note:="" since="" applications="" vary,="" each="" investigator="" should="" titrate="" the="" reagent="" to="" obtain="" optimal="">
Molecular Mass	Recombinant human Activin B is a 14 KDa betaB single chain, containing 123 amino residues.
AA Sequence	HHHHHHHHHHGLECDGRTNLCCRQQFFIDFRLIGWNDWIIAPTGYYGNYCEGSCPA YLAGVPGSASSFHTAVVNQ YRMRGLNPGTVNSCCIPTKLSTMSMLYFDDEYNIVKR DVPNMIVEECG
Endotoxin	< 0.04="" eu="" ug="" protein="" (lal="">
Purity	>97% by SDS-PAGE gel
Applications	Cell culture, Western blot
Storage	This lyophilized preparation is stable at 2-8o C for short term, long storage it should be kept at -20oC. Reconstituted protein should be stored in working aliquots at –20°C and it is recommended to add a carrier protein (0.1% HSA or BSA). Repeated

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	freezing and thawing is not recommended.
Reconstitution	Lyophilized protein should be reconstituted in water to a concentration of 50 ng/ul. Due to the protein nature, dimmers and multimers may be observed. Upon reconstitution, It can be stored in working aliquots at –20°C for future use. Optimal reconstitution please follow batch Quality Control sheet instructions.

GENE INFORMATION

Gene Name	INHBB inhibin, beta B [Homo sapiens]
Official Symbol	INHBB
Synonyms	INHBB; inhibin, beta B; inhibin, beta B (activin AB beta polypeptide); inhibin beta B chain; Inhibin, beta-2; activin beta-B chain; activin AB beta polypeptide; MGC157939;
Gene ID	3625
mRNA Refseq	NM_002193
Protein Refseq	NP_002184
MIM	147390
UniProt ID	P09529
Chromosome Location	2cen-q13
Pathway	Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Glycoprotein hormones,

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	organism-specific biosystem; Metabolism, organism-specific biosystem; Metabolism of amino acids and derivatives, organism-specific biosystem; Peptide hormone biosynthesis, organism-specific biosystem; TGF-beta signaling pathway, organism-specific biosystem;
Function	cytokine activity; growth factor activity; hormone activity; host cell surface receptor binding; protein binding; protein homodimerization activity;

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