

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 <i>Nicotiana benthamiana</i>. 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	<i>Nicotiana Benthamiana</i>
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	HHHHHHHHHGLECDGRTNLCCRQQFFIDFRLIGWNDWIIAPTGYYGNYCEGSCPA 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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