

Active Recombinant Human INHBA, Animal Free

Cat. No. INHBA-131H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human Activin A is a 27.4 kDa disulphide-linked homodimers of two beta-A chains, each containing 116 amino residues. Human recombinant protein expressed in <i>Nicotiana benthamiana</i> . Recombinant human Activin A contains a 6-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	116 a.a.
Description	Activins are homodimers or heterodimers of the various beta subunit isoforms, belonging to the TGFbeta family. Mature Activin A has two 116 amino acids residues betaA subunits (betaA-betaA). 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. Cells known to express Activin A include fibroblasts, endothelial cells, hepatocytes, vascular smooth muscle cells, macrophages, keratinocytes, osteoclasts, bone marrow monocytes, prostatic epithelium, neurons, chondrocytes, osteoblasts, Leydig cells, Sertoli cells, and ovarian granulosa cells. As with other members of the super-family, Activins interact with two types of cell surface trans-membrane receptors (Types I and

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	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. The biological activity of Activin A can be neutralized by inhibins and by the diffusible TGF-B antagonist, Follistatin.
Form	Lyophilized from a Tris HCl 0.05M buffer at pH 7.4.
Bio-activity	The biological activity of Activin A is measured by its ability to inhibit mouse plasmacytoma cell line (MPC-11) cells proliferation ([³ H]thymidine incorporation). ED50 ≤ 5 ng/ml.
Molecular Mass	Recombinant human Activin A is a 27.4 kDa disulphide-linked homodimers of two beta-A chains, each containing 116 amino residues.
AA Sequence	HHHHHHGLECDGKVNICKKQFFVSFKDIGWNDWIIAPSGYHANYCEGECPSHIAG TSGSSLSFHSTVINHYRMR GHSPFANLKSCCVPTKLRPMSMLYYDDGQNIKKDIQN MIVEECGCS
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 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	INHBA inhibin, beta A [Homo sapiens]
Official Symbol	INHBA
Synonyms	INHBA; inhibin, beta A; inhibin, beta A (activin A, activin AB alpha polypeptide); inhibin beta A chain; Inhibin, beta-1; activin beta-A chain; FSH-releasing protein; erythroid differentiation factor; erythroid differentiation protein; follicle-stimulating hormone-releasing protein; EDF; FRP;
Gene ID	3624
mRNA Refseq	NM_002192
Protein Refseq	NP_002183
MIM	147290
UniProt ID	P08476
Chromosome Location	7p15-p13
Pathway	ALK1 signaling events, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Glycoprotein hormones, organism-specific biosystem;

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Metabolism, organism-specific biosystem; Metabolism of amino acids and derivatives, organism-specific biosystem; Peptide hormone biosynthesis, organism-specific biosystem;

Function

cytokine activity; follistatin binding; growth factor activity; hormone activity; identical protein binding; protein binding; protein heterodimerization activity; type II activin receptor binding;

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