

## Recombinant Human INHBA protein, His-tagged

Cat. No. INHBA-761H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Human INHBA (Ser21-Ser426) protein was fused to His-tag at N-terminus and expressed in human 293 cells (HEK293).

**Species** Human

**Source** HEK293

**ProteinLength** Ser21-Ser426

#### Description

Activin and inhibin are two closely related protein complexes that have almost directly opposite biological effects. Activin enhances FSH biosynthesis and secretion, and participates in the regulation of the menstrual cycle. Many other functions have been found to be exerted by activin, including roles in cell proliferation, differentiation, apoptosis, metabolism, homeostasis, immune response, wound repair, and endocrine function. Conversely inhibin down regulates FSH synthesis and inhibits FSH secretion.

Activins are nonglycosylated homodimers or heterodimers of various  $\beta$  subunits ( $\beta$ A,  $\beta$ B,  $\beta$ C, and  $\beta$ E in mammals), while Inhibins are heterodimers of a unique  $\alpha$  subunit and one of the  $\beta$  subunits. Activin A is a widely expressed homodimer of two  $\beta$ A chains. The  $\beta$ A subunit can also heterodimerize with a  $\beta$ B or  $\beta$ C subunit to form Activin AB and Activin AC, respectively. The 14 kDa mature human  $\beta$ A chain shares 100% amino acid sequence identity with bovine, feline, mouse, porcine, and rat  $\beta$ A. Activin is produced in the gonads, pituitary gland, placenta, and other organs. The bioactivity of Activin A is regulated by a variety of mechanisms. In the ovarian follicle,

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activin increases FSH binding and FSH-induced aromatization; Activin is strongly expressed in wounded skin, and overexpression of activin in epidermis of transgenic mice improves wound healing and enhances scar formation; Activin also regulates the morphogenesis of branching organs such as the prostate, lung, and especially kidney. Activin A increased the expression level of type-I collagen suggesting that activin A acts as a potent activator of fibroblasts; Lack of activin during development results in neural developmental defects.

**Predicted N Terminal** Ser21

**Form** Lyophilized from 0.22 µm filtered solution in PBS, pH7.4, 10% trehalose.

**Molecular Mass** The protein has a calculated MW of 13.0 kDa (mature) & 32.0 kDa (pro). As a result of glycosylation and Interchain disulfide bond, the protein migrates as 15 kDa (mature) and 43-48 kDa (pro) unde

**Endotoxin** Less than 1.0 EU per µg by the LAL method.

**Purity** >90% as determined by SDS-PAGE.

**Storage** For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower.  
Please avoid repeated freeze-thaw cycles.  
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.

**Reconstitution** It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

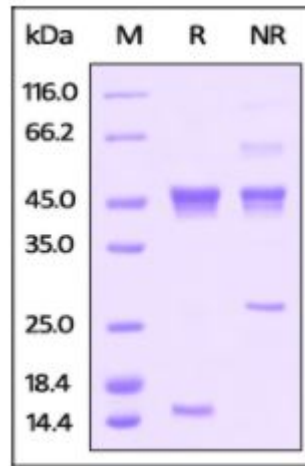
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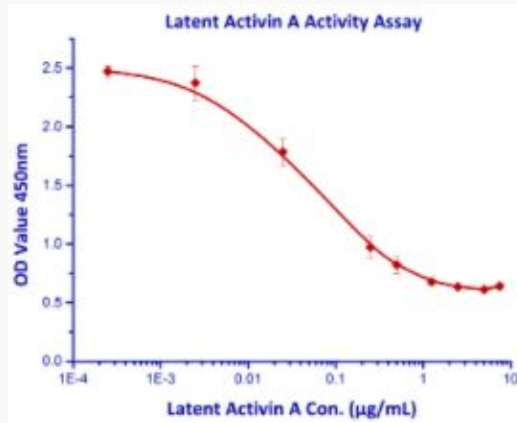
**GENE INFORMATION****Gene Name** INHBA**Official Symbol** INHBA**Synonyms** INHBA; inhibin, beta A; inhibin, beta A (activin A, activin AB alpha polypeptide); inhibin beta A chain; Inhibin, beta-1; activin beta-A chain; FSH-releasing protein; erythroid differentiation factor; erythroid differentiation protein; follicle-stimulating hormone-releasing protein; EDF; FRP**Gene ID** 3624**mRNA Refseq** NM\_002192**Protein Refseq** NP\_002183**MIM** 147290**UniProt ID** P08476 Tel: 1-631-559-9269 1-516-512-3133 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127 45-1 Ramsey Road, Shirley, NY 11967, USA

**SDS-PAGE of  
INHBA-761H**



Human Activin A, His Tag on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

**Bioactivity-Cell  
based assay of  
INHBA-761H**



The bio-activity of Human Latent Activin A, His Tag was determined by dose-dependent inhibition of the proliferation of MPC-11 cells. The EC50 for this effect is typically 47-66 ng/mL (Routinely tested).

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