

## Recombinant Human Activin INHBA protein, low endotoxin

**Cat. No.** INHBA-525H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>Product Overview</b> | Recombinant Human INHBA protein (Gly311-Ser426)(low endotoxin) carries no tag and was expressed in human 293 cells (HEK293).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>ProteinLength</b>    | 116                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>      | <p>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 <math>\beta</math> subunits (<math>\beta</math>A, <math>\beta</math>B, <math>\beta</math>C, and <math>\beta</math>E in mammals), while Inhibins are heterodimers of a unique <math>\alpha</math> subunit and one of the <math>\beta</math> subunits. Activin A is a widely expressed homodimer of two <math>\beta</math>A chains. The <math>\beta</math>A subunit can also heterodimerize with a <math>\beta</math>B or <math>\beta</math>C subunit to form Activin AB and Activin AC, respectively. The 14 kDa mature human <math>\beta</math>A chain shares 100% amino acid sequence identity with bovine, feline, mouse, porcine, and rat <math>\beta</math>A.</p> |
| <b>Form</b>             | Lyophilized from 0.22 um filtered solution in 0.056% TFA in 60% ACN, 10%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|                       |                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | trehalose.                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Molecular Mass</b> | The protein has a calculated MW of 13.0 kDa. the protein migrates as 14 kDa under reducing (R) condition, and 27 kDa under non-reducing (NR) condition (SDS-PAGE).                                                                                                                                                                                                         |
| <b>Endotoxin</b>      | Less than 0.1 EU per ug by the LAL method.                                                                                                                                                                                                                                                                                                                                 |
| <b>Purity</b>         | >95% as determined by SDS-PAGE.                                                                                                                                                                                                                                                                                                                                            |
| <b>Storage</b>        | <p>For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower.</p> <p>Please avoid repeated freeze-thaw cycles.</p> <p>This product is stable after storage at:</p> <p>-20 centigrade to -70 centigrade for 12 months in lyophilized state;</p> <p>-70 centigrade for 3 months under sterile conditions after reconstitution.</p> |
| <b>Reconstitution</b> | 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.                                                                                                                                                                                              |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                      |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | <b>INHBA</b>                                                                                                                                                                                                                                                                                         |
| <b>Official Symbol</b> | <b>INHBA</b>                                                                                                                                                                                                                                                                                         |
| <b>Synonyms</b>        | 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 |
| <b>Gene ID</b>         | <b>3624</b>                                                                                                                                                                                                                                                                                          |

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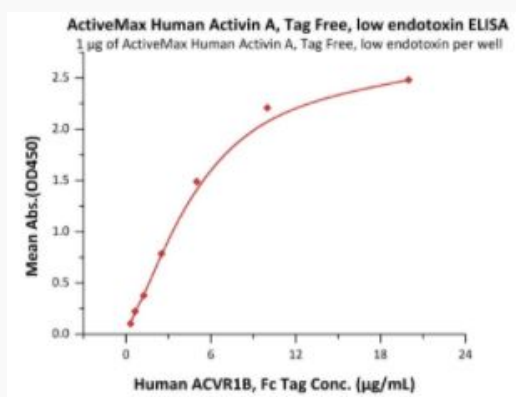
mRNA Refseq [NM\\_002192](#)

Protein Refseq [NP\\_002183](#)

MIM [147290](#)

UniProt ID [P08476](#)

#### Bioactivity-ELISA of INHBA-525H



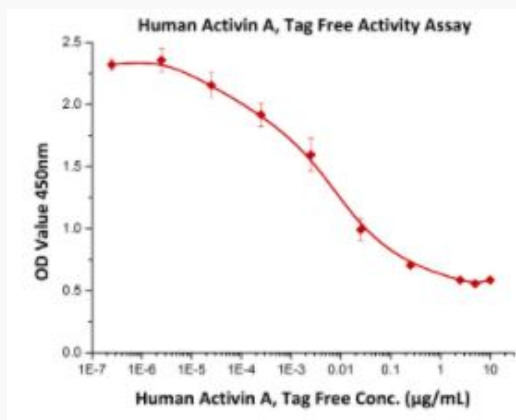
Immobilized Human Activin A, Tag Free, low endotoxin at 10 µg/mL (100 µL/well) can bind Human ACVR1B, Fc Tag with a linear range of 0.3-2.5 µg/mL (Routinely tested).

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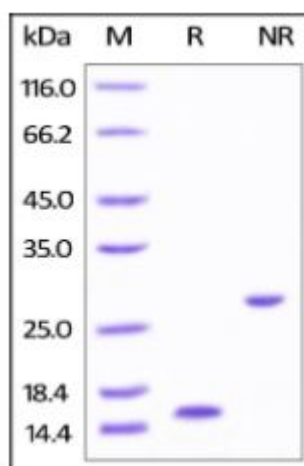
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### Bioactivity-Cell based assay of INHBA-525H



The bio-activity of Human Activin A, Tag Free, low endotoxin was determined by dose-dependent inhibition of the proliferation of MPC-11 cells. The EC<sub>50</sub> for this effect is typically  $\leq 9.5$  ng/mL (Routinely tested).

### SDS-PAGE of INHBA-525H



Human Activin A, Tag Free, low endotoxin 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 95%.