

# Human / Mouse / Rat / Cynomolgus / Rhesus Activin A / INHBA Protein

Catalog Number: 10429-HNAH



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## General Information

### Gene Name Synonym:

EDF; FRP

### Protein Construction:

A DNA sequence encoding mature form of human INHBA (NP\_002183.1) (Gly311-Ser426) was expressed. The mature form sequences of the human, mouse, rat, cynomolgus and rhesus INHBA are identical.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE.

### Bio Activity:

**Measured by its ability to inhibit proliferation of MPC-11 cells. The ED<sub>50</sub> for this effect is 4-16ng/mL.**

### Endotoxin:

< 1.0 EU per µg protein as determined by the LAL method.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** His

### Molecular Mass:

The recombinant human INHBA consists of 116 amino acids and predicts a molecular mass of 13 kDa.

### Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

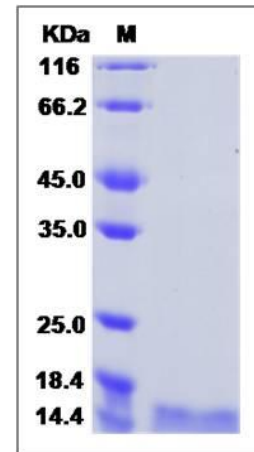
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Activin and inhibin are two closely related protein complexes that have almost directly opposite biological effects. The activin and inhibin protein complexes are both dimeric in structure, and, in each complex, the two monomers are linked to one another by a single disulfide bond. Activin is composed of two  $\beta$  subunits,  $\beta A \beta A$  (activin A),  $\beta B \beta B$  (activin B), or  $\beta A \beta B$  (activin AB). Inhibin is composed of an alpha and one of two  $\beta$  subunits,  $\beta A$  (inhibin A) or  $\beta B$  (inhibin B). Activins are produced in many cell types and organs, such as gonads, pituitary gland, and placenta. In the ovarian follicle, activin increases FSH binding and FSH-induced aromatization. It participates in androgen synthesis enhancing LH action in the ovary and testis. In the male, activin enhances spermatogenesis. In addition, Activin plays a role in wound repair and skin morphogenesis. 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 kidney. There is also evidence showed that lack of activin during development results in neural developmental defects.

## References

1. Tanimoto K, *et al.* (1992) Structure and sequence analysis of the human activin beta A subunit gene. *DNA Seq.* 2 (2): 103-10.
2. Welt C, *et al.* (2002) Activins, inhibins, and follistatins: from endocrinology to signaling. A paradigm for the new millennium. *Exp Biol Med.* 227 (9): 724-52.
3. Xu J, *et al.* (1995) Inhibin antagonizes inhibition of liver cell growth by activin by a dominant-negative mechanism. *J Biol Chem.* 270 (11): 6308-13.

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