

Mouse Inhibin beta A / INHBA / Activin A Protein (His Tag)

Catalog Number: 50659-M08H



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Biological Solution Specialist

General Information

Gene Name Synonym:

INHBA

Protein Construction:

A DNA sequence encoding the pro form of mouse INHBA (NP_032406.1) (Met 1-Ser 424) was expressed, with a C-terminal polyhistidine tag.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 88 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. 2. Immobilized human ACVR2B (Cat:10229-H02H) at 10 µg/mL (100 µl/well) can bind biotinylated mouse INHBA-His (Cat:50659-M08H). The EC_{50} of biotinylated mouse INHBA-His (Cat:50659-M08H) is 0.161 µg/mL. 3. Immobilized mouse INHBA-his at 10 µg/mL (100 µl/well) can bind human Follistatin Protein. The EC_{50} of human Follistatin Protein is 0.39 µg/mL.

Endotoxin:

< 1.0 EU per µg of the 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: Ser 21

Molecular Mass:

The secreted recombinant mouse INHBA comprises 415 amino acids and has a calculated molecular mass of 46.5 kDa. As a result of glycosylation, the apparent molecular mass of mINHBA is approximately 18 & 43 kDa corresponding to the mature inhibin beta A chain and the pro domain respectively in SDS-PAGE under reducing conditions.

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:

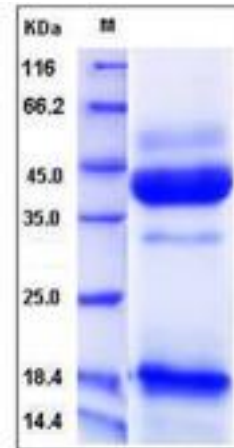
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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 β 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 β subunits, βA (inhibin A) or βB (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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