

PRODUCT INFORMATION



INHBA (recombinant)

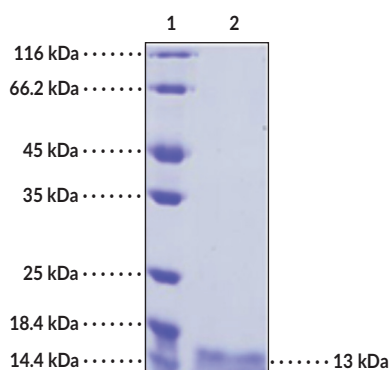
Item No. 32091

Overview and Properties

Synonyms:	Activin β -A Chain, Follicle-Stimulating Hormone-Releasing Protein, Inhibin β -A Chain, Inhibin Subunit β A
Source:	Active recombinant INHBA expressed in HEK293 cells
Amino Acids:	311-426
Uniprot No.:	P08476
Molecular Weight:	13 kDa
Storage:	-80°C (as supplied)
Stability:	≥ 1 year
Purity:	$\geq 95\%$ estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile PBS, pH 7.4
Endotoxin Testing:	< 1.0 EU/ μ g, determined by the LAL endotoxin assay
Bioactivity:	See figures for details

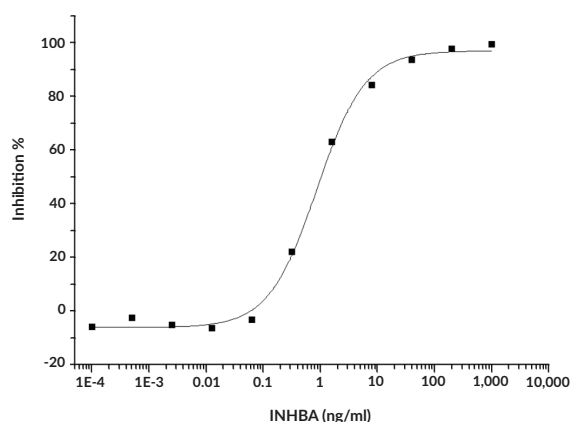
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: INHBA

SDS-PAGE Analysis of INHBA.



INHBA Inhibits Proliferation of MPC-11 Cells. The EC_{50} value for this effect is 4-16 ng/ml.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Inhibin subunit β A (INHBA) is a member of the TGF- β superfamily with roles in germ cell maturation.^{1,2} *INHBA* encodes a 426-amino acid pre-protein, that which is proteolytically cleaved at Gly311 to release the mature INHBA peptide corresponding to amino acids 311-426. Mature INHBA homodimerizes to form activin A, which has roles in the immune response, cell differentiation, and glucose metabolism, and heterodimerizes with INHBB to form inhibin, a complex that negatively regulates gonadal stromal cell proliferation and has tumor suppressor activity. *INHBA* is overexpressed in various cancers, including breast, lung, esophageal, bladder, and colorectal cancers, and this overexpression is positively correlated with poor prognosis.² Expression of *INHBA* is increased in granulosa cells isolated from women with polycystic ovaries compared with granulosa cells isolated from women with healthy ovaries.³ Germline knockout of *Inhba* increases skeletal muscle mass in mice.⁴ Cayman's INHBA (recombinant) protein can be used for cell-based assay applications. This protein consists of 116 amino acids, which correspond to the mature form of human, mouse, and rat, as well as cynomolgus and rhesus monkey, INHBA and has a calculated molecular weight of 13 kDa.

References

1. Loveland, K.L., Hogarth, C., Mendis, S., *et al.* Drivers of germ cell maturation. *Ann. N. Y. Acad. Sci.* **1061(1)**, 173-182 (2005).
2. Li, X., Yang, Z., Xu, S., *et al.* Targeting INHBA in ovarian cancer cells suppresses cancer xenograft growth by attenuating stromal fibroblast activation. *Dis. Markers* 7275289 (2019).
3. Owens, L.A., Kristensen, S.G., Lerner, A., *et al.* Gene expression in granulosa cells from small antral follicles from women with or without polycystic ovaries. *J. Clin. Endocrinol. Metab.* **104(12)**, 6182-6192 (2019).
4. Verbrugge, S.A.J., Schönfelder, M., Becker, L., *et al.* Genes whose gain or loss-of-function increases skeletal muscle mass in mice: A systematic literature review. *Front. Physiol.* **9**, 553 (2018).

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