

APA838Hu61 100µg
Active Inhibin Beta A (INHbA)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Eukaryotic expression.

Host: 293F cell

Residues: Ser21~Ser426

Tags: N-terminal His-tag

Purity: >95%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 5% Trehalose .

Original Concentration: 200µg/mL

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 7.9

Predicted Molecular Mass: 46.6kDa

Accurate Molecular Mass: 60&44&13kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

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                SPTPGSEGHS AAPDCPSCAL AALPKDVPNS
QPEMVEAVKK HILNMLHLKK RPDVTQVPVK AALLNAIRKL HVGKVGNGY
VEIEDDIGRR AEMNELMEQT SEITFAESG TARKTLHFEI SKEGSDLSVV
ERAEVWFLK VPKANRTRTK VTIRLFQQQK HPQGS�DTGE EAEVGLKGE
RSELLLSEKV VDARKSTWHV FVSSSIQRL LDQGKSSLDV RIACEQCQES
GASLVLLGKK KKKEEEGEGK KGGGEGGAG ADEEKEQSHR PFLMLQARQS
EDHPHRRRRR GLECDGKVINI CCKKQFFVSF KDIGWNDWII APSGYHANYC
EGECPSHIAG TSGSSLSFHS TVINHYMRG HSPFANLKSC CVPTKLRPMS
MLYYDDGQNI IKKDIQNMIV EECGCS
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[ACTIVITY]

Inhibin Beta A (INHbA) is a member of the transforming growth factor-beta (TGFb) superfamily that exerts a variety of biological functions, including immune response, sex determination, stem cell differentiation, and control of cellular migration and proliferation. Besides INHbA is aberrantly expressed in multiple tumor types, including breast, lung, esophageal, bladder, and colorectal cancers, and this overexpression is positively correlated with poor prognosis. 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. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human INHbA and recombinant rat INHbB. Briefly, biotin-linked INHbA were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100ul were then transferred to INHbB-coated microtiter wells and incubated for 1h at 37 °C . Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C . Finally, add 50 µl stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant human INHbA and recombinant rat INHBB was shown in Figure 1, the EC50 for this effect is 2.2 ug/mL.

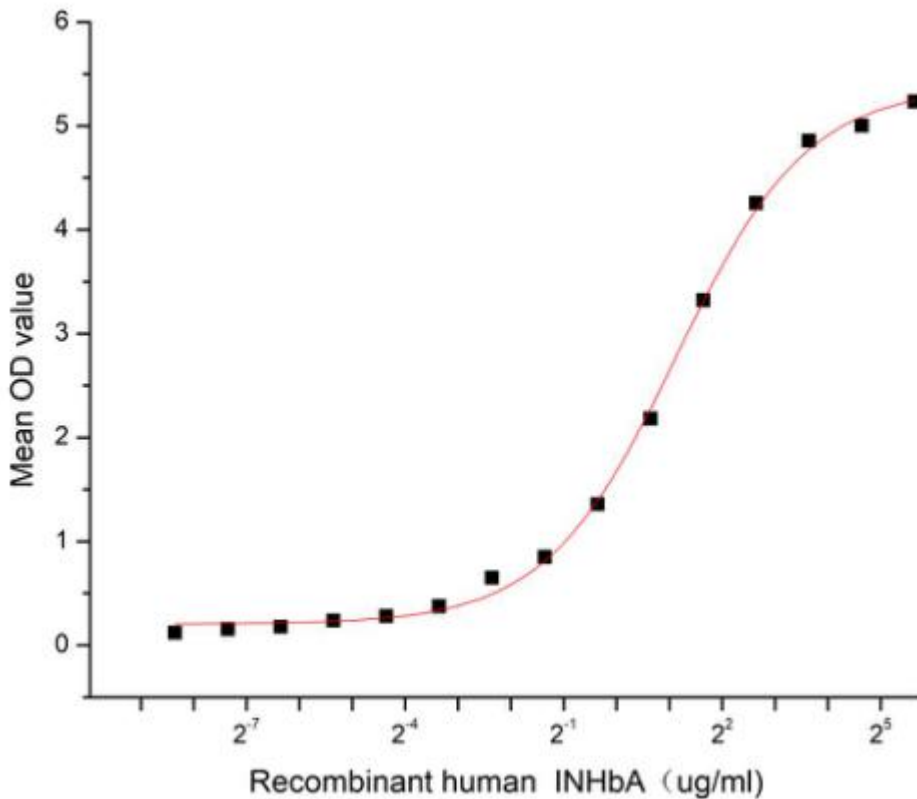


Figure 1. The binding activity of recombinant human INHbA and recombinant rat INHbB

[IDENTIFICATION]

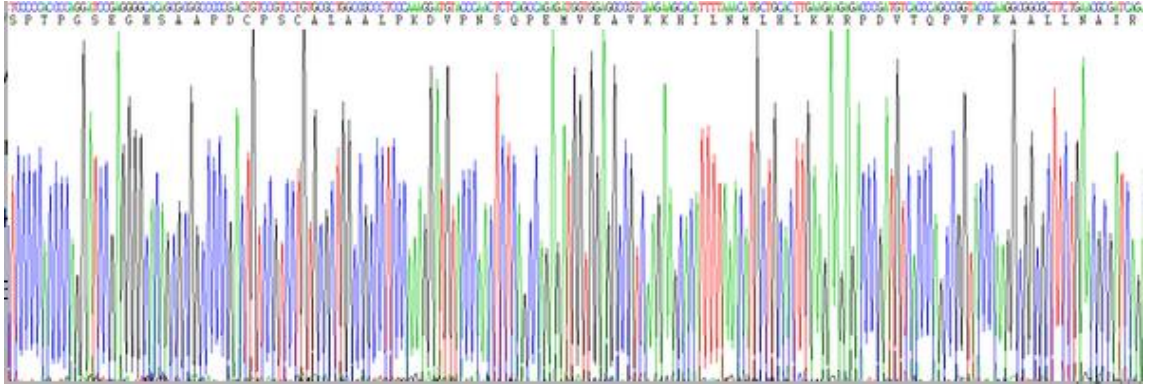


Figure 2. Gene Sequencing (extract)

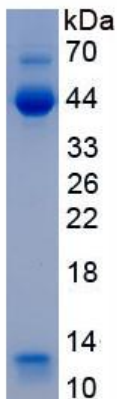


Figure 3. SDS-PAGE

Sample: Active recombinant INHbA, Human

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.