

**APB212Hu61 100µg**  
**Active Chromogranin A (CHGA)**  
**Organism Species: *Homo sapiens* (Human)**  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Eukaryotic expression.

**Host:** 293F cell

**Residues:** Gln15~Gly148

**Tags:** N-terminal His-tag

**Purity:** >80%

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

**Buffer Formulation:** PBS, pH7.4, containing 5% trehalose.

**Applications:** Cell culture; Activity Assays.

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

**Predicted isoelectric point:** 4.5

**Predicted Molecular Mass:** 16.6kDa

**Accurate Molecular Mass:** 20&27kDa 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 (pH7.6) 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.

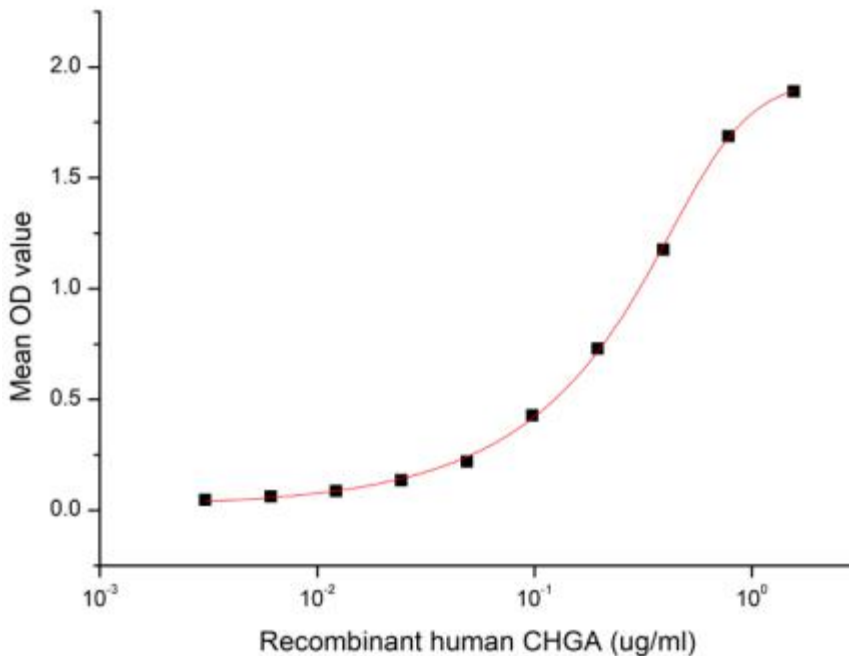
## **[ SEQUENCE ]**

```
QVTALPVNSPMNKGDEVMKCIIVEVISDTLSKPSMPVVSQECFETLRGDERILSILRHQNLLKELQDLALQGAKEAHHQKKHSGFED  
ELSEVLENQSSQAEELKEAVEEPSSKDVMEKREDSKEAEKSGEATDG
```

## **[ ACTIVITY ]**

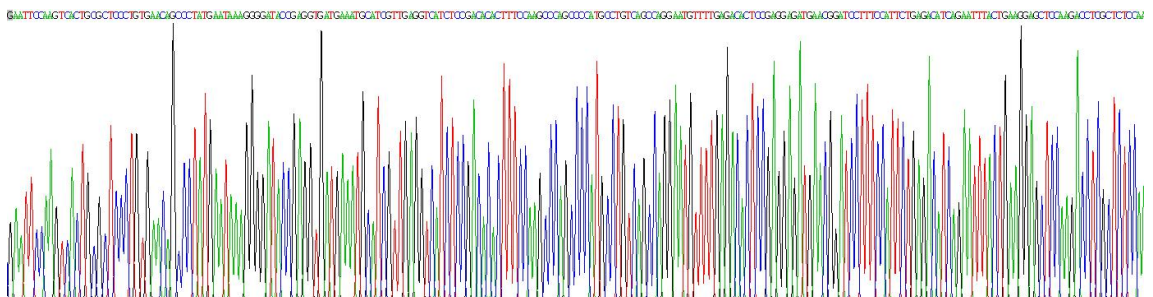
Chromogranin A (CHGA), also known as pituitary secretory protein I (SP-I), is a member of the granin family of regulated secretory proteins. CHGA shares several protein characteristics common to the granin family: acidic isoelectric point, the capacity to bind calcium ions, the ability to form aggregates and multiple dibasic cleavage sites. Mature human CHGA is 439 amino acids (aa) and contains 10 dibasic, proteolytic cleavage sites, capable of yielding several smaller peptides, each displaying a unique function. CHGA is expressed exclusively in the secretory dense core granules of most normal and neoplastic neuroendocrine cells. A functional binding ELISA assay was conducted to detect the interaction of recombinant human CHGA and recombinant human LHb. Briefly, biotin-linked CHGA was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to LHb-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 CHGA and LHb was shown in Figure 1, the EC50 for this effect is 0.3 ug/mL.

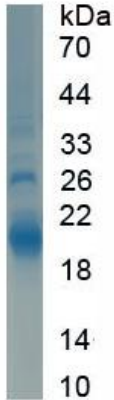


**Figure 1. The binding activity of recombinant human CHGA and recombinant human LHb**

## [ IDENTIFICATION ]



**Figure 2. Gene Sequencing (extract)**



**Figure 3. SDS-PAGE**

**Sample: Active recombinant CHGA, 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.