

APA438Hu02 100µg
Active Growth Hormone Releasing Hormone (GHRH)
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: Prokaryotic expression.

Host: *E. coli*

Residues: Pro21~Gly108

Tags: N-terminal His-tag

Purity: >95%

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

Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Activity Assays.

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

Predicted isoelectric point: 11.4

Predicted Molecular Mass: 13.8kDa

Accurate Molecular Mass: 14kDa as determined by SDS-PAGE reducing conditions.

[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]

PPPPLTLRMRRYADAIFTNSYRKVLGQLSARKLLQDIMSRQQGESNQERGARA
RLGRQVDSMWAEQKQMELESILVALLQKHSRNSQG

[ACTIVITY]

Growth Hormone Releasing Hormone (GHRH), also known as somatocrinin, is a peptide hormone secreted by the hypothalamus. It binds to specific receptors in the pituitary gland, stimulating the synthesis and release of growth hormone (GH), which regulates growth, metabolism, and cellular functions. Growth Hormone Releasing Hormone Receptor (GHRHR) is a transmembrane receptor located on the surface of pituitary cells. It has a specific binding site that can precisely recognize and bind to GHRH. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human GHRH and recombinant human GHRHR. Briefly, biotin-linked GHRH were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to GHRHR-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 μ l stop solution to the wells and read at 450nm immediately. The binding activity of GHRH and GHRHR was shown in Figure 1, the EC₅₀ for this effect is 0.228ug/mL.

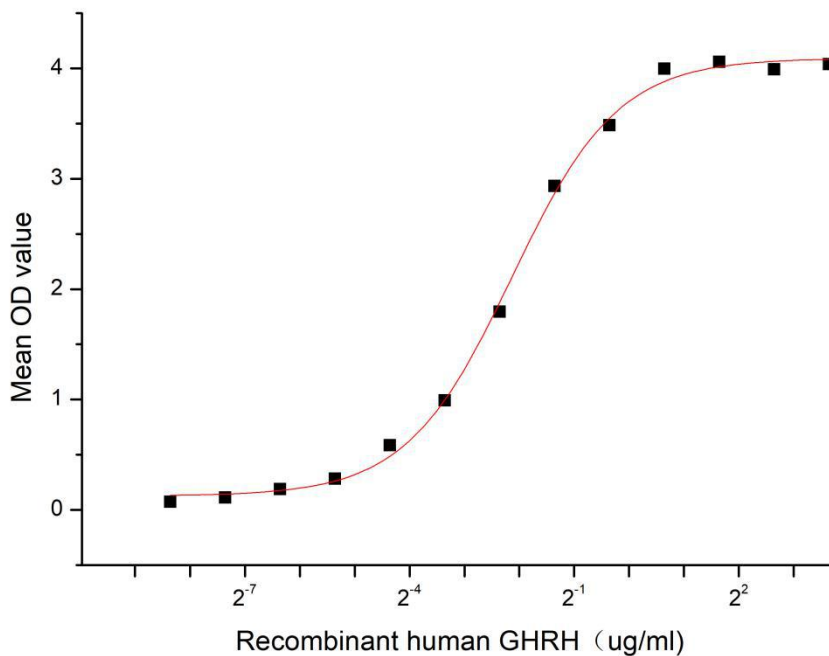


Figure 1. The binding activity of recombinant human GHRH and recombinant human GHRHR

[IDENTIFICATION]

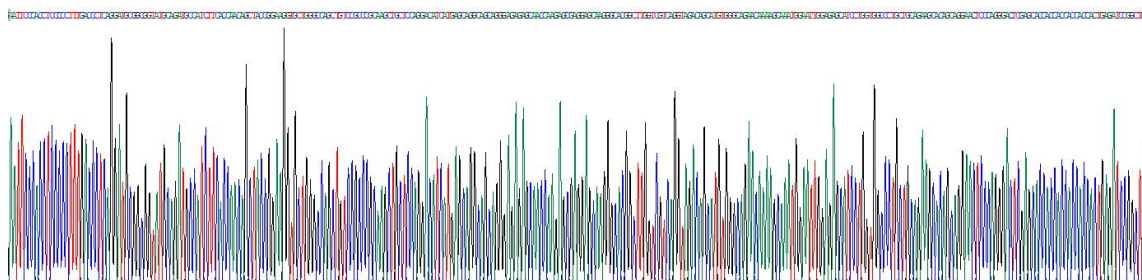


Figure 2. Gene Sequencing (extract)

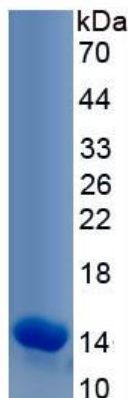


Figure 3. SDS-PAGE

Sample: Active recombinant GHRH, 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.