

APA044Mu61 100µg

Active Growth Hormone (GH)

Organism Species: *Mus musculus (Mouse)*

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: Phe27~Phe216

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: Activity Assays.

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

Predicted isoelectric point: 6.8

Predicted Molecular Mass: 23.5kDa

Accurate Molecular Mass: 24kDa 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]

FPAMPLSSLFSSNAVLRAQHLHQLAADTYKEFERAYIPEGQRYSIQNAQAACFSETIPAPTGKEEAQQRDMELLRFSLLLIQSWLGP
VQFLSRIFTNSLMFGTSDRVYEKLDLEEGIQALMQELEDGSPRVGQILKQTYDKFDANMRSDALLKNYGLLSCFKKDLHKAETYL
VMKCRRFVESSCAF

[ACTIVITY]

Growth Hormone (GH), also known as somatotropin, is a peptide hormone synthesized and secreted by the somatotroph cells of the anterior pituitary gland. It plays a pivotal role in growth regulation, metabolism, and cellular repair across multiple tissues. GH exerts its effects both directly and indirectly through the stimulation of insulin-like growth factor 1 (IGF-1) production in the liver. The hormone binds to the growth hormone receptor (GHR), a member of the cytokine receptor superfamily, activating the JAK2-STAT signaling pathway to regulate gene expression. GH secretion is pulsatile, primarily controlled by hypothalamic growth hormone-releasing hormone (GHRH) and somatostatin. Beyond its growth-promoting functions, GH influences lipid metabolism, glucose homeostasis, and immune function. Besides, Prolactin (PRL) has been identified as an interactor of GH, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse GH and recombinant rabbit PRL. Briefly, biotin-linked GH were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to PRL-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 recombinant mouse GH and recombinant rabbit PRL was shown in Figure 1, the EC50 for this effect is 0.74 μ g/mL.

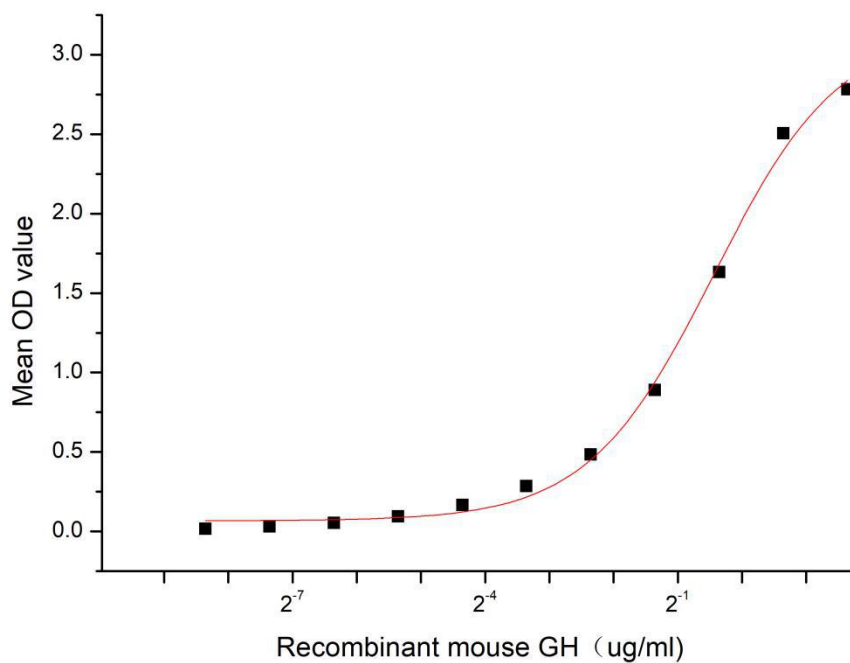


Figure 1. The binding activity of recombinant mouse GH and recombinant rabbit PRL

[IDENTIFICATION]

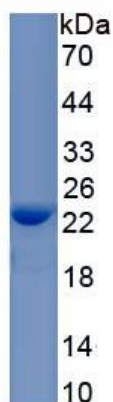


Figure 2. SDS-PAGE

Sample: Active recombinant GH, Mouse

[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.