

APA044Hu01 100µg
Active Growth Hormone (GH)
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: Pro28~Phe217

Tags: N-terminal His-tag

Purity: >90%

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

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 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: 6.4

Predicted Molecular Mass: 25.7kDa

Accurate Molecular Mass: 23kDa 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]

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PTI PLSRLFDNAM LRAHRLHQLA
FDTYQEFEEA YIPKEQKYSF LQNPQTSLCF SESIPTPSNR EETQQKS NLE
LLRISLLLLIQ SWLEPVQFLR SVFANSLVYG ASDSNVYDLL KDLEEGIQTL
MGRLEDGSPR TGQIFKQTYS KFDTNSHNDD ALLKNYGLLY CFRKDMDKVE
TFLRIVQCRS VEGSCGF
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[ACTIVITY]

Growth Hormone (GH), also known as somatotropin, is a member of a family of growth factors. Human growth hormone is a 191 amino acid single-chain polypeptide produced via the anterior pituitary of the brain in the acidophilic, somatotrophic cells. Its production is tightly regulated through several complex feedback mechanisms in response to stress, exercise, nutrition, sleep, and growth hormone itself. Annexin A2 (ANXA2) has been shown to play multiple roles in growth, development, metabolism and ANXA2 is a high affinity receptor for GH. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human GH and recombinant human ANXA2. Briefly, GH was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to ANXA2-coated microtiter wells and incubated for 1h at 37 °C . Wells were washed with PBST and incubated for 1h with anti-GH pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C , 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 450/630 nm immediately. The binding activity of

recombinant human GH and recombinant human ANXA2 was shown in Figure 1, the EC50 for this effect is 2.1 ug/mL.

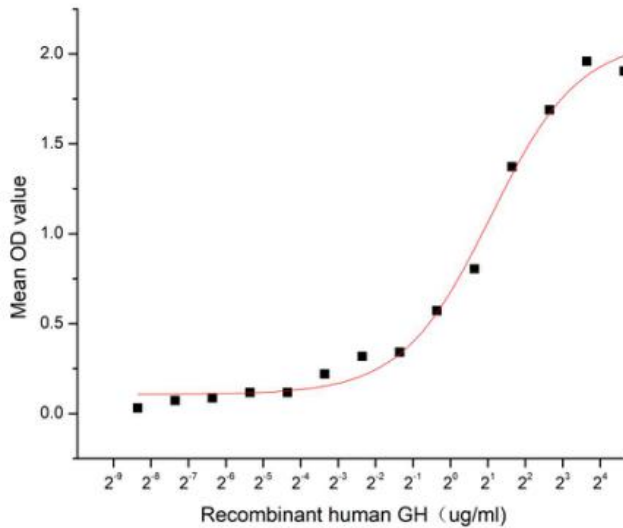


Figure 1. The binding activity of recombinant human GH and recombinant human ANXA2

[IDENTIFICATION]

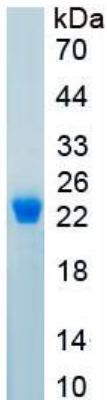


Figure 2. SDS-PAGE

Sample: Active recombinant GH, 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.