

APA052Hu61 100µg

Active Insulin Like Growth Factor Binding Protein 1 (IGFBP1)

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: Ala26~Asn259

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: 4.8

Predicted Molecular Mass: 26.9kDa

Accurate Molecular Mass: 35kDa 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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APWQCAPCSAEKLALCPPVSASCSEVTRSAGCGCCPMCALPLGAACGVATARCARGLSRCLPGEQQPL  
HALTRGQGACVQESDASAPHAEEAGSPESPESTEITEEELLDNFHLMAPSEEDHSILWDAISTYDGSKA  
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PWNGKRIPGSPEIRGDPNCQIYFNVQN
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[ACTIVITY]

Insulin Like Growth Factor Binding Protein 1 (IGFBP1) is a member of the IGFBP family that binds to insulin-like growth factors (IGFs) with high affinity. IGFBP1 plays a crucial role in regulating the biological activities of IGFs, which are important for growth and development. IGFBP1 is primarily produced in the liver and is also secreted by various other tissues, including the decidua of the uterus during pregnancy. Its levels in the bloodstream are influenced by factors such as nutritional status, insulin levels, and growth hormone. To detect the activity of recombinant IGFBP1, a functional ELISA assay was performed to evaluate the interaction between recombinant human IGFBP1 and recombinant rabbit Insulin-Like Growth Factor 2 (IGF2). Briefly, biotin-linked IGFBP1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100µl were then transferred to IGF2-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 50µl stop solution to the wells and read at 450nm immediately. The binding activity of IGFBP1 and IGF2 was shown in Figure 1, the EC50 for this effect is 0.085µg/mL.

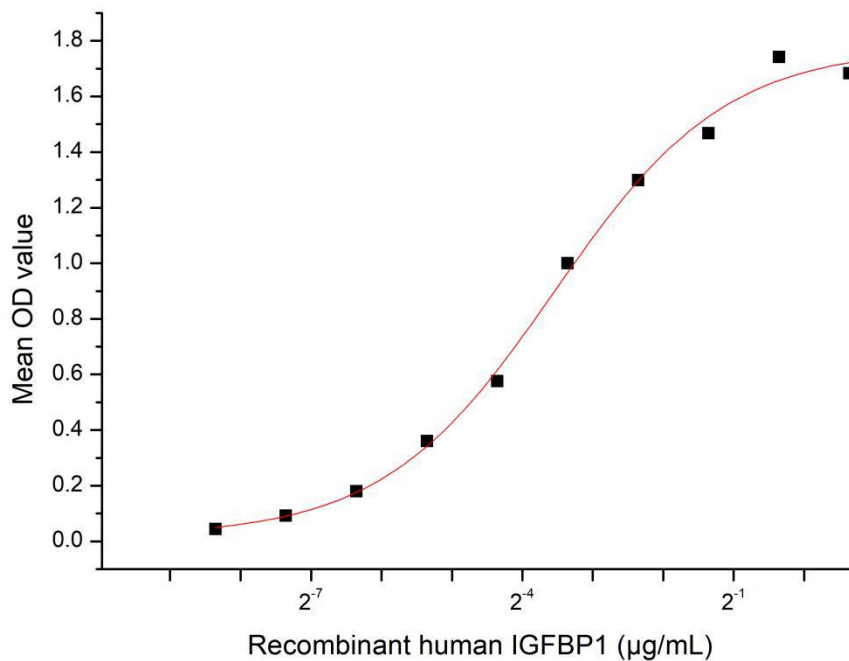


Figure 1. The binding activity of recombinant human IGFBP1 and recombinant rabbit IGF2

[IDENTIFICATION]

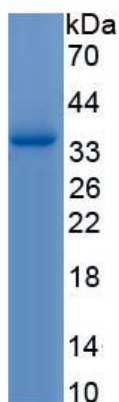


Figure 2. SDS-PAGE

Sample: Active recombinant IGFBP1, 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.