

APA052Ra61 100µg

Active Insulin Like Growth Factor Binding Protein 1 (IGFBP1)

Organism Species: *Rattus norvegicus (Rat)*

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~Asn272

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: 5.6

Predicted Molecular Mass: 31.3kDa

Accurate Molecular Mass: 33kDa 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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APQPW HCAPCTAERL ELCPPVPASC
PEISRPAGCG CCPTCALPLG AACGVATARC AQLGLSCRALP GEPRPLHALT
RGQGACVLEP AAPATSSLSG SQHEEAKAAV ASEDELAESP EMTEEQLLDS
FHLMAPSRED QPILWNAIST YSSMRAREIT DLKKWKEPCQ RELYKVLRL
AAAQQKAGDE IYKFYLPNCN KNGFYHSKQC ETSLDGEAGL CWCVYPWSGK
KIPGSLETRG DPNCHQYFNV QN
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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 conducted to detect the interaction of recombinant rat IGFBP1 and recombinant human Insulin Like Growth Factor 1 (IGF1). Briefly, IGFBP1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to IGF1-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-IGFBP1 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 450/630nm immediately. The binding activity of recombinant rat IGFBP1 and recombinant human IGF1 was shown in Figure 1, the EC50 for this effect is 0.222ug/mL.

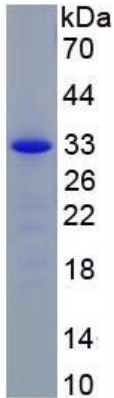


Figure 3. SDS-PAGE

Sample: Active recombinant IGFBP1, Rat

[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.