

**APA053Mu61 100µg**  
**Active Insulin Like Growth Factor Binding Protein 2 (IGFBP2)**  
**Organism Species: *Mus musculus (Mouse)***  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Eukaryotic expression.

**Host:** 293F cell

**Residues:** Ala34~Gln305

**Tags:** N-terminal His-tag

**Purity:** >90%

**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:** 7.3

**Predicted Molecular Mass:** 56.8kDa

**Accurate Molecular Mass:** 70kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

## [ 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.

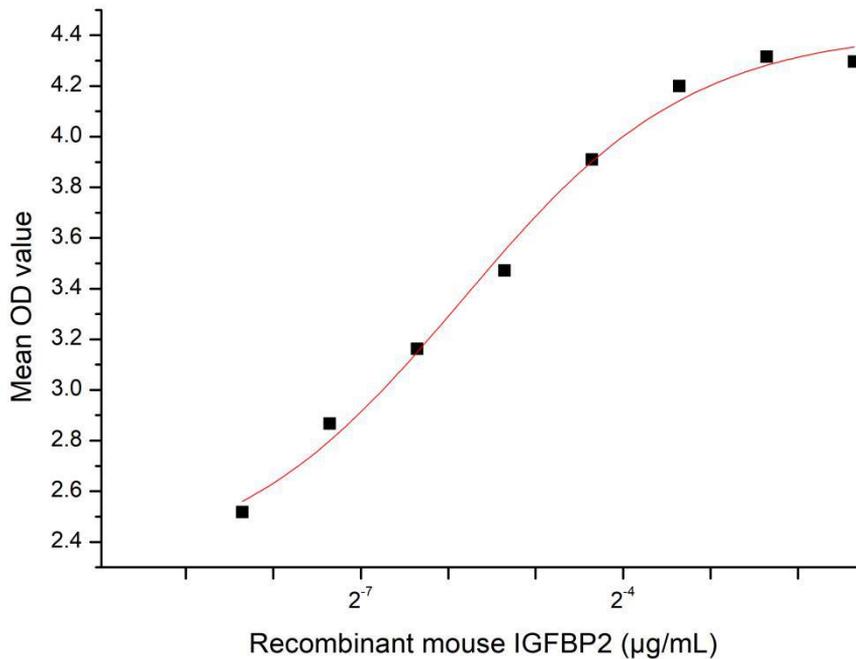
## [ SEQUENCE ]

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DQVLERISTMRLPDDRGLPLEHLYSLHIPNCDKHGRYNLKQCKMSLNGQRGECWCVNPNTGKPIQGAPTIRGDPECHLFYNEQQETGGAH  
AQSVM
```

## [ ACTIVITY ]

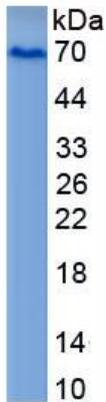
Insulin Like Growth Factor Binding Protein 2 (IGFBP2) is a key member of the IGFBP family that modulates the bioavailability and activity of insulin-like growth factors (IGF-I and IGF-II). Primarily secreted by the liver, IGFBP2 binds IGFs with high affinity, prolonging their half-life while regulating their interaction with IGF receptors. Beyond its classical IGF-regulatory role, IGFBP2 exhibits IGF-independent functions in cell migration, apoptosis, and angiogenesis through interactions with integrins and extracellular matrix components. To detect the activity of recombinant IGFBP2, a functional ELISA assay was performed to evaluate the interaction between recombinant mouse IGFBP2 and recombinant human Insulin Like Growth Factor 1 (IGF1). Briefly, IGFBP2 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ 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-IGFBP2 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 µL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant mouse IGFBP2 and recombinant human IGF1 was shown in Figure 1, the EC50 for this effect is 0.017µg/mL.



**Figure 1. The binding activity of recombinant mouse IGFBP2 and recombinant human IGF1**

**[ IDENTIFICATION ]**



**Figure 2. SDS-PAGE**

**Sample: Active recombinant IGFBP2, 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.