APA053Hu61 100μg
Active Insulin Like Growth Factor Binding Protein 2 (IGFBP2)
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: Asp148~Gln325
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: 7.9
Predicted Molecular Mass: 21.6kDa
Accurate Molecular Mass: 21kDa 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 37ºC 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]

DNGDDHSEGG LVENHVDSTM NMLGGGGSAG RKPLKSGMKE LAVFREKVTE QHRQMGKGGK HHLGLEEPKK LRPPPARTPC QQELDQVLER ISTMRLPDER GPLEHLYSLH IPNCDKHGLY NLKQCKMSLN GQRGECWCVN PNTGKLIQGA PTIRGDPECH LFYNEQQEAR GVHTQRMQ

[ACTIVITY]

Insulin Like Growth Factor Binding Protein 2 (IGFBP2) is a crucial member of the IGFBP family, encoded by the IGFBP2 gene and widely expressed in tissues like the liver, brain, and bone. It regulates insulin-like growth factor (IGF) signaling by binding to IGFs, modulating their bioavailability and interactions with receptors. Dysregulated IGFBP2 is associated with cancer progression, metabolic disorders, and developmental abnormalities, as it balances cell proliferation, differentiation, and apoptosis. IGFBP2 binds to IGF1R directly or via IGF bridging, enhancing IGF1R-mediated downstream signaling to promote cellular processes. Briefly, IGF1R was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to IGFBP2-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-IGF1R pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately. Measured by its binding ability in a functional ELISA. When Recombinant IGFBP2 is Immobilized at 2 μg/mL(100 uLwell), the concentration of IGF1R that produces 50% optimal bindingresponse is found to be approximately 0.23754 μg/mL.

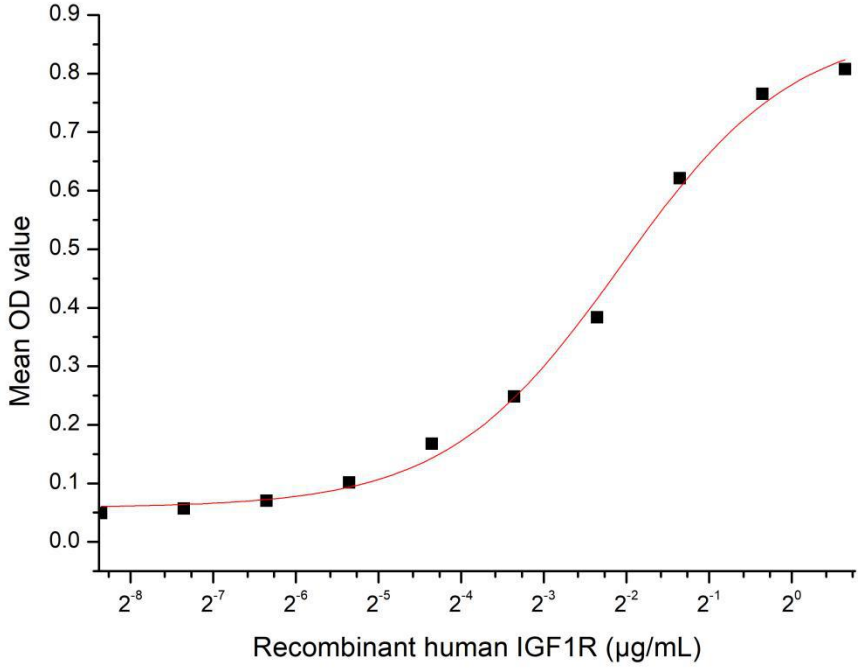


Figure 1. The binding activity of recombinant IGF1R and IGFBP2

[IDENTIFICATION]

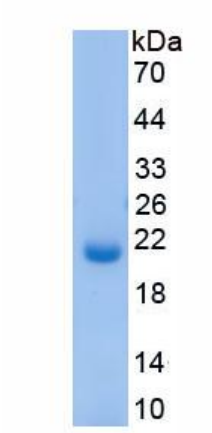


Figure 2. SDS-PAGE

Sample: Active recombinant IGFBP2, 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.