APA055Ra61 100μg
Active Insulin Like Growth Factor Binding Protein 4 (IGFBP4)
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: Asp22~Glu254
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: 7.0
Predicted Molecular Mass: 27.3kDa
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 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]

DEAIHCPPC SEEKLARCRP PVGCEELVRE
PGCGCCATCA LGLGMPCGVY TPRCGSGMRC YPPRGVEKPL RTLMHGQGVC
TELSEIEAIQ ESLQTSDKDE SEHPNNSFNP CSAHDHRCLQ KHMAKVRDRS
KMKVVGTPRE EPRPVPQGSC QSELHRALER LAASQSRTHE DLFIIPIPNC
DRNGNFHPKQ CHPALDGQRG KCWCVDRKTG VKLPGGLEPK GELDCHQLAD
SLQE

[ACTIVITY]

Insulin Like Growth Factor Binding Protein 4 (IGFBP4), corresponding to product code A055Ra, is a key member of the IGFBP family, widely expressed in tissues like the liver, kidneys, and bones. Its primary role is to regulate the biological activity of Insulin Like Growth Factors (IGFs). By binding to IGFs, it controls their free concentration in the circulation, prevents rapid degradation, and modulates their transport to target tissues. IGFBP4 also participates in processes such as cell proliferation, differentiation, and tissue development, with implications in growth disorders and cancer research. IGFBP4 (A055Ra) specifically binds to IGF1 (A050Po), regulating IGF1’s availability to its receptors and thus its biological effects.Briefly, IGF1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to IGFBP4-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-IGF1 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 IGFBP4 is Immobilized at 2 μg/mL(100 uLwell), the concentration of IGF1 that produces 50% optimal bindingresponse is found to be

approximately 0.0938 μg/mL.

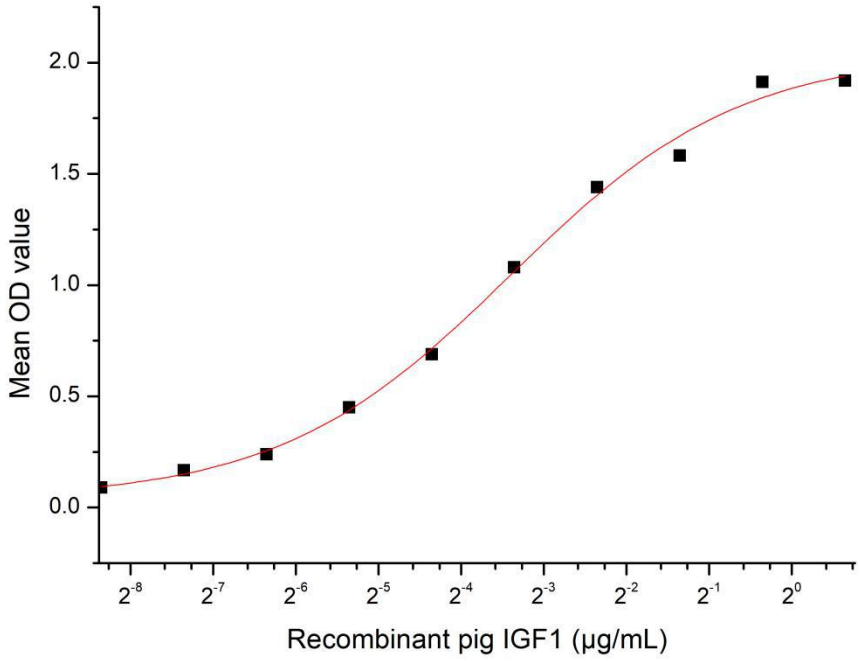


Figure 1. The binding activity of recombinant IGF1 and IGFBP4

[IDENTIFICATION]

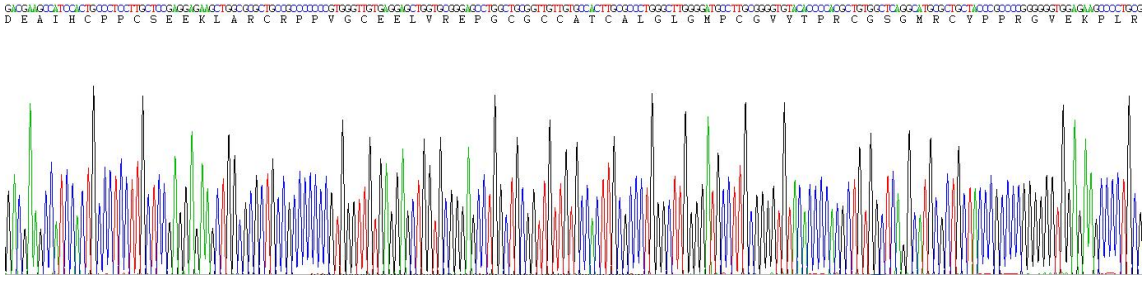


Figure 2. Gene Sequencing (extract)

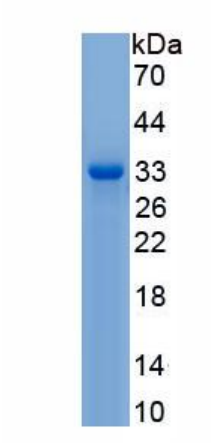


Figure 3. SDS-PAGE

Sample: Active recombinant IGFBP4, 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.