APC659Ra61 100μg
Active Insulin Like Growth Factor Binding Protein 5 (IGFBP5)
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: His25~Glu271
Tags: N-terminal His-tag
Purity: >80%
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: 8.2
Predicted Molecular Mass: 29.6kDa
Accurate Molecular Mass: 38kDa 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]

HCEPCDEKALSMCPPSPLGCELVKEPGCGCCMTCALAEGQSCGVYTERCAQGLRCLPRQDEE
KPLHALLHGRGVCLNEKSYGEQTKIERDSREHEEPTTSEMAEETYSPKVFRPKHTRISELKAEAVK
KDRRKKLTQSKFVGGAENTAHPRVIPAPEMRQESDQGPCRRHMEASLQEFKASPRMVPRAVY
LPNCDRKGFYKRKQCKPSRGRKRGICWCVDKYGMKLPGMEYVDGDFQCHAFDSSNVE

[ACTIVITY]

Insulin Like Growth Factor Binding Protein 5 (IGFBP5) is a protein that plays an important role in regulating the activity of Insulin Like Growth Factors (IGFs). It has a high affinity for IGFs and is widely distributed in various tissues. IGFBP5 can bind to Insulin Like Growth Factor 2 (IGF2) in the extracellular space. By binding to IGF2, it can modulate the bioavailability and half-life of IGF2, either enhancing or inhibiting the interaction of IGF2 with its receptors, thus influencing cell growth, proliferation, and differentiation.Thus a functional ELISA assay was conducted to detect the interaction of recombinant rat IGFBP5 and recombinant rabit IGF2. Briefly, IGFBP5 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to IGF2-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-IGFBP5 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. The binding activity of recombinant rat IGFBP5 and recombinant rabit IGF2 was shown in Figure 1, the EC50 for this effect is 7.021ug/mL.

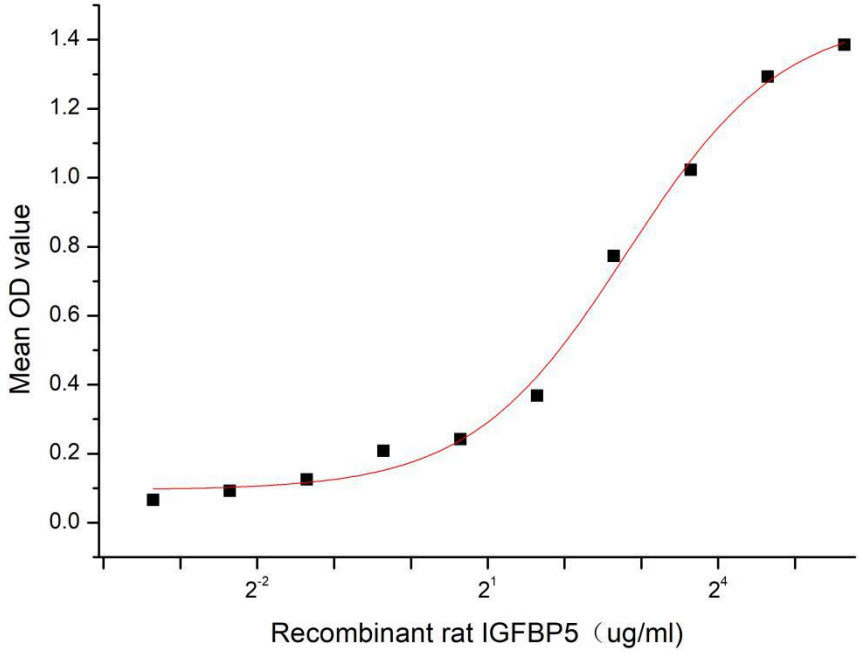

Figure 1. The binding activity of recombinant rat IGFBP5 and recombinant rabit IGF2

[IDENTIFICATION]

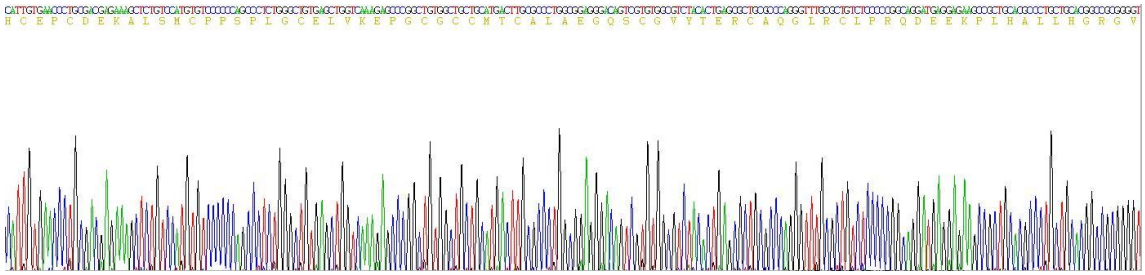

Figure 2. Gene Sequencing (extract)

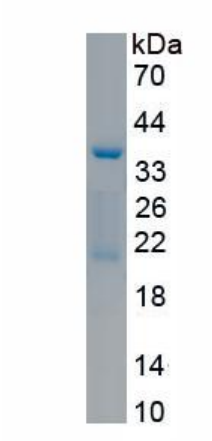

Figure 3. SDS-PAGE

Sample: Active recombinant IGFBP5, 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.