

**APA998Ra01 100µg**

**Active Glypican 4 (GPC4)**

**Organism Species: *Rattus norvegicus (Rat)***

***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:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Ala222~Leu468

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

**Purity:** >90%

**Endotoxin Level:** <1.0EU per 1µg (determined by the LAL method).

**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .

**Original Concentration:** 200µg/mL

**Applications:** Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

**Predicted isoelectric point:** 7.1

**Predicted Molecular Mass:** 28.5kDa

**Accurate Molecular Mass:** 27kDa 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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AQGLAVARD VVNRVSVVNP TAQCTQALLK
MIYCSHRGL VTKPCYNYC SNIMRGCLAN QGDLDEWNN FIDAMLMAE
RLEGPFNIES VMDPIDVKIS DAIMNMQDNS VQVSQKVFQG CGPPKPLPAG
RISRSISESA FSARFRPYHP EQRPTTAAGT SLDRLVTDVK EKLKQAKKFW
SSLPSTVCND ERMAAGNENE DDCWNGKSKS RYLFAVTGNG LANQGNNPEV
QVDTSKPDIL ILRQIMAL
```

## **[ ACTIVITY ]**

Glypican 4 (GPC4) is a cell surface heparan sulfate proteoglycans which composed of a membrane-associated protein core substituted with a variable number of heparan sulfate chains. Members of the glypican-related integral membrane proteoglycan family (GRIPS) contain a core protein anchored to the cytoplasmic membrane via a glycosyl phosphatidylinositol linkage. These proteins may play a role in the control of cell division and growth regulation. Besides, Fibroblast Growth Factor 2, Basic (FGF2) has been identified as an interactor of GPC4, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat GPC4 and recombinant human FGF2. Briefly, GPC4 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to FGF2-coated microtiter wells and incubated for 1h at 37 °C . Wells were washed with PBST and incubated for 1h with anti-GPC4 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, 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  $\mu$ L stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant rat GPC4 and recombinant human FGF2 was shown in Figure 1, the

EC50 for this effect is 2.64 ug/mL.

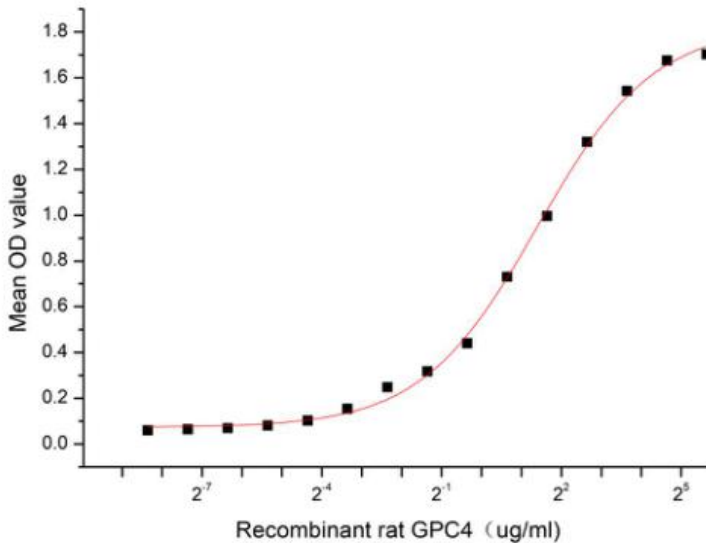


Figure 1. The binding activity of recombinant rat GPC4 and recombinant human FGF2

**[ IDENTIFICATION ]**

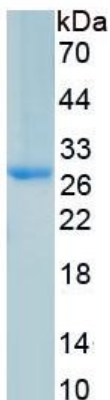


Figure 2. SDS-PAGE

Sample: Active recombinant GPC4, 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.