

**APB032Mu01 100µg**

**Active Glypican 1 (GPC1)**

**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:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Gly343~Val545

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

**Purity:** >95%

**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:** 6.8

**Predicted Molecular Mass:** 23.2kDa

**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.

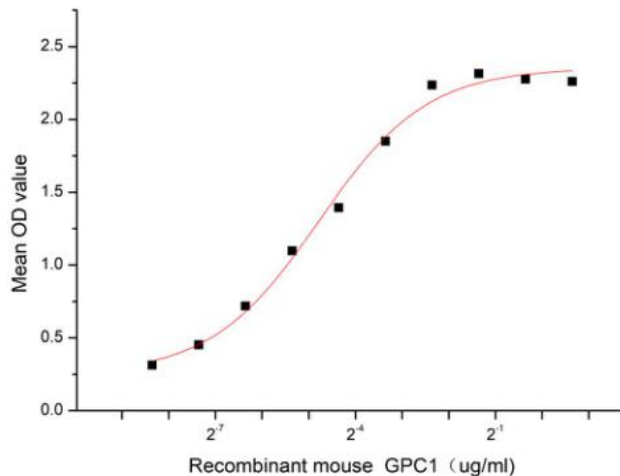
## [ SEQUENCE ]

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GNPKVNP  H  GSGPEEKRRR
GKLALQEKPS  TGTLEKLVSE  AKAQLRDIQD  FWISLPGTLC  SEKMAMSPAS  DDRCWNGISK
GRYLPEVMGD  GLANQINNPE  VEVDITKPDM  TIRQQIMQLK  IMTNRLRGAY  GGNDVDFQDA
SDDGSGSGSG  GGCPDDTCGR  RVSKKSSSSR  TPLTHALPGL  SEQEGQK TSA  ATCPEPHSFF
LLFLV
```

## [ ACTIVITY ]

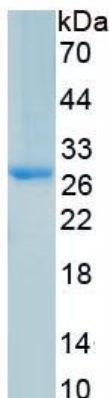
Glypican 1 (GPC1) is one of the six glycosylphosphatidylinositol-anchored, cell surface heparan sulfate proteoglycans that acts as a growth factor signaling. Cells known to express GPC-1 include neurons, smooth and skeletal muscle cells, keratinocytes, osteoblasts, Schwann cells, immature dendritic cells, and tumor, plus tumor-associated vascular endothelial cells. The function of GPC-1 is complex and varied, it can modulate various signaling pathways including Heparin Binding Epidermal Growth Factor Like Growth Factor (HBEGF), fibroblast growth factors (FGF), vascular endothelial growth factor-A (VEGF-A), transforming growth factor- $\beta$  (TGF- $\beta$ ), Wnt, Hedgehog (Hh), and bone morphogenic protein (BMP) through specific interactions with pathway ligands and receptors. Besides, Syndecan 4 (SDC4) has been also identified as an interactor of GPC1), thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse GPC1 and recombinant chicken SDC4. Briefly, GPC1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to SDC4-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-GPC1 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 450/630 nm immediately. The binding activity of recombinant mouse GPC1 and recombinant chicken SDC4 was shown in Figure 1, the EC50 for this effect is 0.04 ug/mL.



**Figure 1. The binding activity of recombinant mouse GPC1 and recombinant chicken SDC4**

## **[ IDENTIFICATION ]**



**Figure 2. SDS-PAGE**

**Sample: Active recombinant GPC1, 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.