

APA971Hu02 100µg

Active Glypican 3 (GPC3)

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: Prokaryotic expression.

Host: *E. coli*

Residues: Thr343~His559

Tags: His and TrxA Taq

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: 6.1

Predicted Molecular Mass: 45.0kDa

Accurate Molecular Mass: 47kDa 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**]

TTIGKLCA
HSQQRQYRSA YYPEDLFDIK KVLKVAHVEH EETLSSRRRE LIQKLKSFIS
FYSALPGYIC SHSPVAENDT LCWNGQELVE RYSQKAARNG MKNQFNLHEL
KMKGPEPVVS QIIDKCLKHIN QLLRTMSMPK GRVLDKNLDE EGFESGDCGD
DEDECIGGSG DGMIVKKNQL RFLAELAYDL DVDDAPGNSQ QATPKDNEIS
TFHNLGNVH

[**ACTIVITY**]

Glypican-3 (GPC3), a 70 kDa protein, is a member of the glypican family that attaches to the cell surface by a glycosylphosphatidylinositol anchor, is specifically up-regulated in hepatocellular carcinoma (HCC) although rarely or not expressed in normal liver tissues, making it a perfect diagnostic and treatment target for HCC. GPC3 is also a negative transcriptional regulator and tumor suppressor that inhibits the growth of breast, ovary, and lung cancer cells. It is reported that GPC3 can form a complex with insulin-like growth factor 2 (IGF2), and might thereby modulate IGF2 action. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human GPC3 and recombinant rabbit IGF2. Briefly, biotin-linked GPC3 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°C. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then 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 human GPC3 and recombinant rabbit IGF2 was shown in Figure 1, the EC50 for this effect is 0.055 ug/mL.

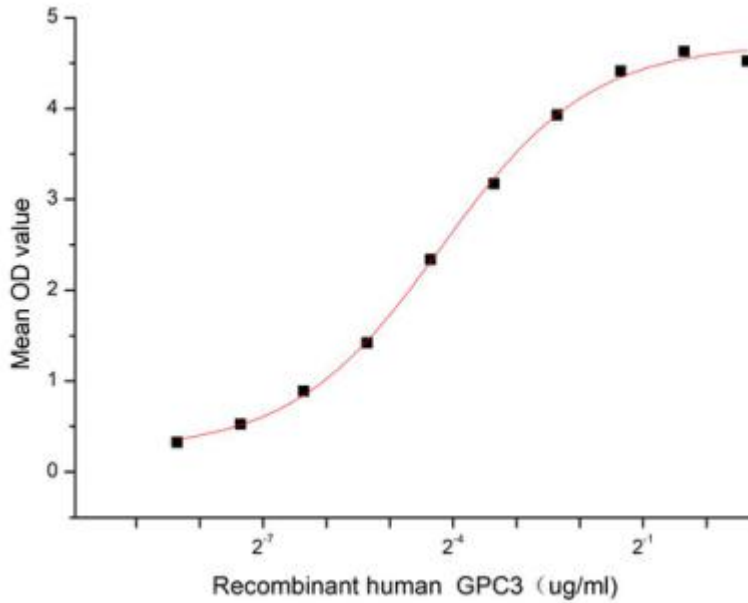


Figure 1. The binding activity of recombinant human GPC3 and recombinant rabbit IGF2

[IDENTIFICATION]

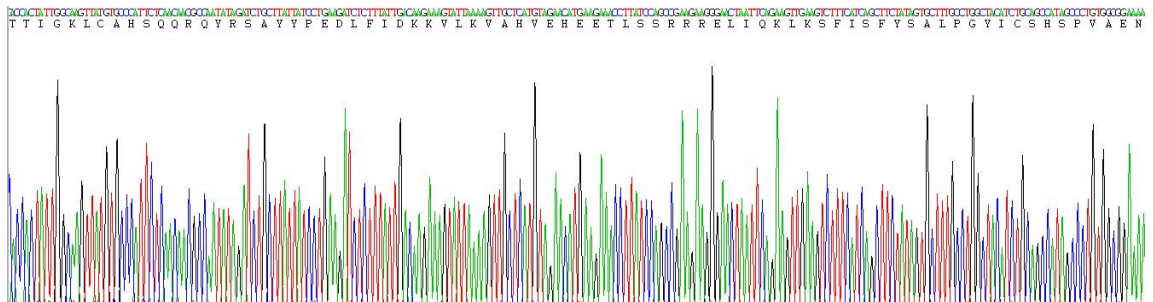


Figure 2. Gene Sequencing (extract)



Figure 3. SDS-PAGE

Sample: Active recombinant GPC3, 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.