

APB585Hu61 100µg

Active Glypican 2 (GPC2)

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: Eukaryotic expression.

Host: 293F cell

Residues: Val338~Thr562

Tags: N-terminal His-tag

Purity: >95%

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

Buffer Formulation: PBS, pH7.4, containing 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: 9.7

Predicted Molecular Mass: 25.6kDa

Accurate Molecular Mass: 33&65kDa 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]

VSA QVFQECGPPD
PVPARRRAP PPREEAGRLW SMVTEERPT TAAGTNLHRL VWELRERLAR
MRGFWARLSL TVCGDSRMAA DASLEAAPCW TGAGRGRYLP PVVGGSPAEQ
VNNPELKVDA SGPDPVPTRRR RLQLRAATAR MKTAALGHDL DGQDAEDAS
GSGGGQYAD DWMAGAVAPP ARPPRPPYPP RRDGSGGKGG GGSARYNQGR
SRSGGASIGF HT

[ACTIVITY]

Glypican 2 (GPC2), a member of glypican (GPC) family genes, produces proteoglycan with a glycosylphosphatidylinositol anchor. Level of the various glypicans changes in a stage and tissue specific manner. Syndecan-2 is expressed in cells of mesenchymal origin, neuronal and epithelial cells, and is the predominant syndecan expressed during embryonic development. Human Syndecan-2 is synthesized as a 201 amino acid (aa) core protein with an 18 aa signal sequence, a 126 aa extracellular domain (ECD), a 25 aa transmembrane region and a 32 aa cytoplasmic tail. The human ECD of Syndecan-2 contains three closely-spaced consensus Ser-Gly sequences for the attachment of HS side chains. It shares 76%, 73%, 87%, 78% and 63% aa identity with the ECD of

mouse, rat, bovine, canine and chicken Syndecan-2, respectively. SDC1 has been identified as an interactor of GPC2, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human GPC2 and recombinant bovine SDC1. Briefly, biotin-linked GPC2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to SDC1-coated microtiter wells and incubated for 1h at 37 $^{\circ}$ 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 $^{\circ}$ C. Finally, add 50 μ l stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant human GPC2 and recombinant bovine SDC1 was shown in Figure 1, the EC₅₀ for this effect is 195.6 ng/mL.

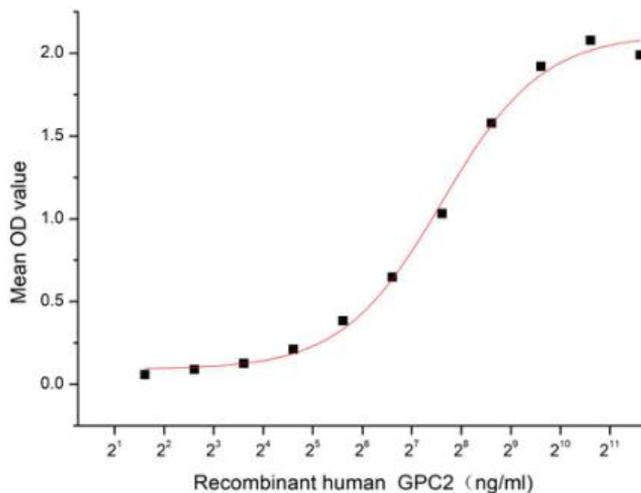


Figure 1. The binding activity of recombinant human GPC2 and recombinant bovine SDC1

[IDENTIFICATION]

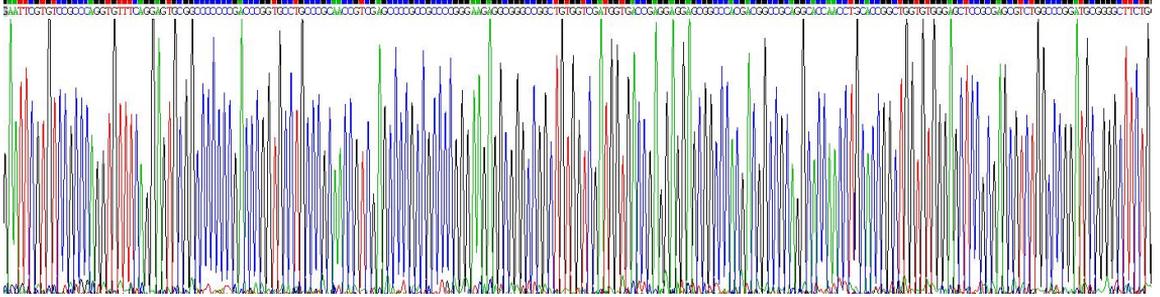


Figure 2. Gene Sequencing (extract)



Figure 3. SDS-PAGE

Sample: Active recombinant GPC2, 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.