abcam

ab237290

Alexa Fluor® 647 Anti-Glypican 1/ GPC1 antibody [EPR19285]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR19285
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	This product gave a positive signal in HeLa fixed with 100% methanol (5 min).

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Target data

See full target information GPC1

Function	Cell surface proteoglycan that bears heparan sulfate. Binds, via the heparan sulfate side chains, alpha-4 (V) collagen and participates in Schwann cell myelination (By similarity). May act as a catalyst in increasing the rate of conversion of prion protein PRPN(C) to PRNP(Sc) via associating (via the heparan sulfate side chains) with both forms of PRPN, targeting them to lipid rafts and facilitating their interaction. Required for proper skeletal muscle differentiation by sequestering FGF2 in lipid rafts preventing its binding to receptors (FGFRs) and inhibiting the FGF-mediated signaling.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Stable for 12 months at -20°C, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Glypican 1 (GPC1) also known as glypican-1 is a heparan sulfate proteoglycan anchored to the cell membrane via a glycosylphosphatidylinositol (GPI) anchor. This protein belongs to the glypican family and has an approximate mass of 60 to 70 kDa. GPC1 is found mainly on the surface of cells in the central nervous system as well as in muscle tissues and certain epithelial cells. Its structure facilitates interaction with cell surface receptors and extracellular matrix components playing an important role in cellular communication and signaling processes.
Biological function summary	GPC1 influences the regulation of growth factors and morphogens and it has a significant role in the cell division and growth processes. It is not recognized as part of any larger protein complex but interacts with diverse ligand molecules. Researchers identify GPC1 as an important facilitator of fibroblast growth factors (FGF) and sonic hedgehog (Shh) signaling. Its interaction with molecular partners helps to regulate developmental signals important for proper cellular function and organ development.
Pathways	The contributions of GPC1 are observed in the hedgehog signaling pathway and fibroblast growth factor signaling. GPC1's interaction within the hedgehog pathway is critical for organizing cellular growth and differentiation while its

	involvement in the FGF pathway supports angiogenesis and wound healing. GPC1 coordinates with other glypican family members and related proteins like FGFR1 to mediate these signaling processes effectively.
Associated diseases and disorders	Researchers have linked GPC1 with cancer progression and neurodegenerative diseases. Abnormal GPC1 expression is often noted in pancreatic cancer influencing tumor growth and metastasis through its modulation of growth factor signaling. Moreover its role in neurodegenerative conditions such as Alzheimer's disease establishes connections with amyloid-beta peptides and tau proteins contributing to disease pathogenesis. These associations make GPC1 an intriguing target for therapeutic intervention and a focus for ongoing medical research.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

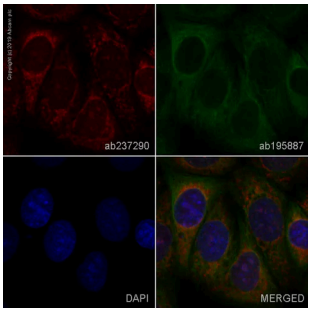
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

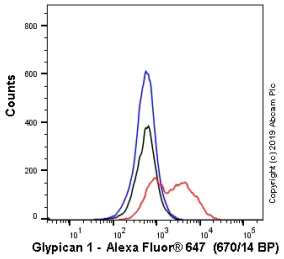
2 product images



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-Glypican 1/ GPC1 antibody [EPR19285] (ab237290)

Glypican 1/ GPC1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Glypican 1/ GPC1 antibody

ab237290 staining Glypican 1/ GPC1 in HeLa cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab237290 at 1/100 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 1/250 dilution (shown in green). Nuclear DNA was labeled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Flow Cytometry (Intracellular) - Alexa Fluor® 647 Anti-Glypican 1/ GPC1 antibody [EPR19285] (ab237290)

Glypican 1/ GPC1 Flow Cytometry (Intracellular) staining using rabbit Anti-Glypican 1/ GPC1 antibody

Overlay histogram showing MCF7 cells stained with ab237290 (red line).
The cells were incubated in 1x PBS/10% normal Goat serum to block non-specific protein-protein interactions followed by the antibody (ab237290) ($1x10^6$ in 100 µl at 1 µg/ml (1/500)) for 30 min at 22°C.

Isotype control antibody (black line) was Rabbit IgG (monoclonal) Alexa Fluor® 647 (ab199093) used at the same concentration and conditions as the primary antibody. Unlabeled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 40 mW Red laser (640nm) and 670/14 bandpass filter.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.