abcam

ab199343

Anti-Glypican 1/ GPC1 antibody [EPR19285]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% 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	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/60
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
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	Conditional Ambient
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

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.

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.

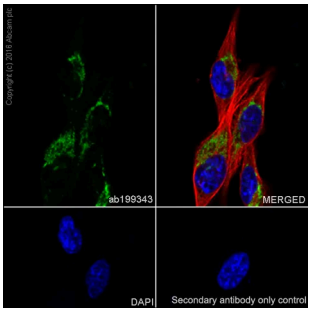
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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5 product images



Immunocytochemistry/ Immunofluorescence - Anti-Glypican 1/ GPC1 antibody [EPR19285] (ab199343)

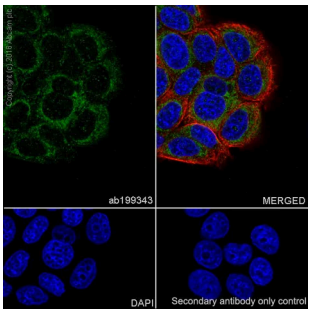
Glypican 1/ GPC1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Glypican 1/ GPC1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized MDA-MB-231 (Human breast adenocarcinoma cell line) cells labeling Glypican 1/ GPC1 with ab199343 at 1/500 dilution followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing membrane associated and cytoplasmic staining on MDA-MB-231 cell line.

The nuclear counterstain is DAPI (blue).

Tubulin is detected with ab195889 (Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is ab150077 at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Glypican 1/ GPC1 antibody [EPR19285] (ab199343)

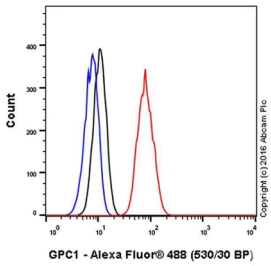
Glypican 1/ GPC1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Glypican 1/ GPC1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed 0.1% Triton X-100 permeabilized MCF7 (Human breast adenocarcinoma cell line) cells labeling Glypican 1/ GPC1 with ab199343 at 1/500 dilution followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing cytoplasmic staining on MCF7 cell line.

The nuclear counterstain is DAPI (blue).

Tubulin is detected with ab195889 (Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)) at 1/200 dilution (red).

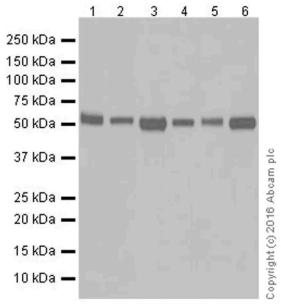
Secondary antibody only control: Used PBS instead of primary antibody secondary antibody is ab150077 at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-Glypican 1/ GPC1 antibody [EPR19285] (ab199343)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed MDA-MB-231 (Human breast adenocarcinoma cell line) cells labeling Glypican 1/ GPC1 with ab199343 at 1/60 dilution (red) compared with a RabbitIgG,monoclonal[EPR25A]-Isotype control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti Rabbit IgG (Alexa Fluorr® 488) at 1/2000 dilution was used as the secondary antibody.



Western blot - Anti-Glypican 1/ GPC1 antibody [EPR19285] (ab199343)

Glypican 1/ GPC1 Western blot staining using rabbit Anti-Glypican 1/ GPC1 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
The molecular weight observed is consistent with the literature (PMID: 9802880).

All lanes:
Western blot - Anti-Glypican 1/ GPC1 antibody [EPR19285] (ab199343) at 1/1000 dilution

Lane 1:
MDA-MB-231 (Human breast adenocarcinoma cell line) whole cell lysate at 20 µg

Lane 2:
MOLT-4 (Human lymphoblastic leukemia cell line) whole cell lysate at 20 µg

Lane 3:
HepG2 (Human liver hepatocellular carcinoma cell line) whole cell lysate at 20 µg

Lane 4:
K562 (Human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate at 20 µg

Lane 5:
SH-SY5Y (Human neuroblastoma cell line from bone marrow) whole cell lysate at 20 µg

Lane 6:
MCF7 (Human breast adenocarcinoma cell line) whole cell lysate at 20 µg

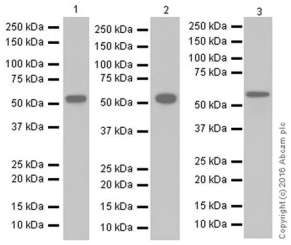
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 61 kDa

Observed band size: 55 kDa

Exposure time: 3s



Western blot - Anti-Glypican 1/ GPC1 antibody [EPR19285] (ab199343)

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1: 5 seconds; Lanes 2 and 3: 10 seconds.

All lanes:
Western blot - Anti-Glypican 1/ GPC1 antibody [EPR19285] (ab199343) at 1/1000 dilution

Lane 1:
Human fetal kidney lysate at 10 µg

Lane 2:
Human colon lysate at 10 µg

Lane 3:
Human fetal spleen lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 61 kDa

Observed band size: 55 kDa

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