abcam

ab247712

Anti-Glycophorin C/GPC antibody [EPR4116] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR4116
Purification technique	Affinity purification
Concentration	1.02 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information GYPC

Function	This protein is a minor sialoglycoprotein in human erythrocyte membranes. The blood group Gerbich antigens and receptors for Plasmodium falciparum merozoites are most likely located within the extracellular domain. Glycophorin-C plays an important role in regulating the stability of red cells.

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab247712 is the carrier-free version of ab108925.

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	Glycophorin C also known as GPC is a membrane glycoprotein with a molecular mass of approximately 32 kDa. GPC is recognized by other names such as Glycophorin A-like and it is a significant component of the erythrocyte membrane. Researchers frequently refer to glycophorin C by its common abbreviation GPC. GPC expression occurs specifically in red blood cells where it plays a role in

	maintaining the cell structure and integrity by forming part of the interface between the cell membrane and the cytoskeleton.
Biological function summary	Glycophorin C modulates red blood cell characteristics by interacting with band 4.1 protein complex. The protein participates in the regulation of cell shape and mechanical flexibility which are important for the red blood cells to flow through capillaries effectively. This process involves interactions with spectrin and actin within the cytoskeleton underpinning the cellular architecture. The protein's function as an anchor for the band 4.1 complex links it with other glycophorins such as Glycophorin A.
Pathways	GPC integrates into erythrocyte membrane-associated pathways supporting membrane stability. It is key to the cytoskeleton-membrane linkage pathway where it interacts with proteins like spectrin and actin. Aimed at preserving the biconcave shape of erythrocytes these interactions enhance membrane elasticity and durability ensuring proper red blood cell function in the circulation. Additionally its association with the protein Rh-linked ankyrin connects GPC with pathways involving erythrocyte ion transport processes.
Associated diseases and disorders	GPC plays a notable role in elliptocytosis and malaria. Elliptocytosis arises from mutations affecting GPC and other erythrocyte proteins such as band 4.1 leading to elongated and dysfunctional erythrocytes. Individuals with altered GPC expression show increased susceptibility or resistance to malaria caused by the Plasmodium parasite’s interaction with erythrocyte membrane proteins. Glycophorin C therefore remains an important focus of study for understanding the molecular basis of these conditions and designing therapeutic interventions.

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

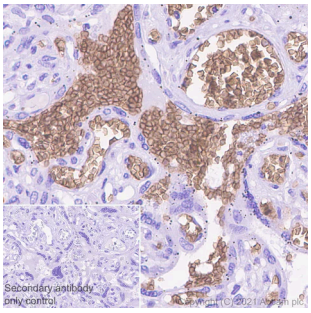
We do not recommend this combination. It is not covered by our product promise.

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.

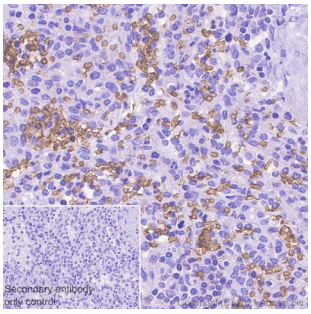
5 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glycophorin C/GPC antibody [EPR4116] - BSA and Azide free (ab247712)

Glycophorin C/GPC Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Glycophorin C/GPC antibody

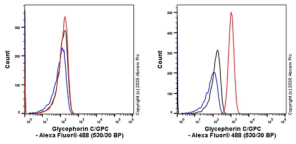
This data was developed using ab108925, the same antibody clone in a different buffer formulation.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human placenta tissue sections labeling Glycophorin C/GPC with Purified ab108925 at 1:1500 dilution (0.06 µg/ml). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) . Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) secondary antibody was used. PBS instead of the primary antibody was used as the negative control. M3



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glycophorin C/GPC antibody [EPR4116] - BSA and Azide free (ab247712)

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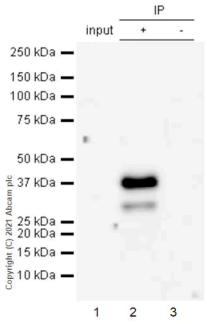
Flow Cytometry (Intracellular) - Anti-Glycophorin C/GPC antibody [EPR4116] - BSA and Azide free (ab247712)

Glycophorin C/GPC Flow Cytometry (Intracellular) staining using rabbit Anti-Glycophorin C/GPC antibody

This data was developed using ab108925, the same antibody clone in a different buffer formulation.

Flow Cytometry analysis of A549 (Human lung carcinoma epithelial cell, Left) / K-562 (Human chronic myelogenous leukemia lymphoblast, Right) cells labeling Glycophorin C/GPC with purified ab108925 at 1/10000 dilution (0.1 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control -

Cell without incubation with primary antibody and secondary antibody (Blue).
Negative control: A549.



Immunoprecipitation - Anti-Glycophorin C/GPC antibody [EPR4116] - BSA and Azide free (ab247712)

This data was developed using ab108925, the same antibody clone in a different buffer formulation.
Glycophorin C/GPC was immunoprecipitated from 0.35 mg TF-1 (Human Erythroleukemia erythroblast) whole cell lysate 10 µg with 108925 at 1/50 dilution (2µg). VeriBlot for IP Detection Reagent (HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: TF-1 (Human Erythroleukemia erythroblast) whole cell lysate 10 µg

Lane 2: ab108925 IP in TF-1 whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab108925 in TF-1 whole cell lysate

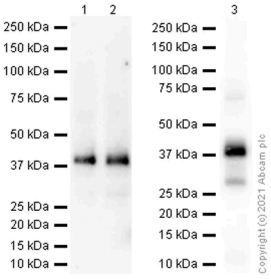
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Lower band could be N-Deglycosylated GPC. (PMID: 16461900)

All lanes:
Immunoprecipitation - Anti-Glycophorin C/GPC antibody [EPR4116] (ab108925)

Predicted band size: 14 kDa

Observed band size: 40 kDa



Western blot - Anti-Glycophorin C/GPC antibody [EPR4116] - BSA and Azide free (ab247712)

All lanes:
Western blot - Anti-Glycophorin C/GPC antibody [EPR4116] (ab108925) at 1/1000 dilution

Lane 1:
TF-1 (Human Erythroleukemia erythroblast) whole cell lysate

Lane 2:
K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysate

Lane 3:
Human red blood lysate

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 14 kDa

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