abcam

ab218372

Anti-Glycophorin A antibody [EPR8200] - 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	EPR8200
Purification technique	Affinity purification Protein A
Dissociation constant	2.38 x 10^{-10} M
Concentration	0.986 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	-
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

WB

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information GYPA

Function

Component of the ankyrin-1 complex, a multiprotein complex involved in the stability and shape of the erythrocyte membrane (PubMed:35835865). Glycophorin A is the major intrinsic membrane protein of the erythrocyte. The N-terminal glycosylated segment, which lies outside the erythrocyte membrane, has MN blood group receptors. Appears to be important for the function of SLC4A1 and is required for high activity of SLC4A1. May be involved in translocation of SLC4A1 to the plasma membrane. (Microbial infection) Appears to be a receptor for Hepatitis A virus (HAV). (Microbial infection) Receptor for P.falciparum erythrocyte-binding antigen 175 (EBA-175); binding of EBA-175 is dependent on sialic acid residues of the O-linked glycans.

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

ab218372 is the carrier-free version of ab129024.

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 A also known as CD235a is a major glycoprotein of red blood cell membranes with a mass around 31 kDa. It is importantly expressed on the surface of erythrocytes. Glycophorin A plays an important role in maintaining cell membrane integrity and is associated with various antigenic sites which are important for compatibility testing. Researchers often detect Glycophorin A using antibodies such as Glycophorin A APC or Glycophorin A FITC in flow cytometry studies due to its distinct expression on red blood cells.
Biological function summary	Glycophorin A interacts with other membrane proteins to form part of the membrane's skeletal protein network. This network stabilizes the erythrocyte structure and contributes to its flexibility essential for passing through narrow

	capillaries. Glycophorin A does not form part of any large multiprotein complex but does interact with other glycophorins such as Glycophorin B. These interactions help to form the MN and Ss blood group antigens.
Pathways	Glycophorin A is involved in several pathways including the erythrocyte development and lipid raft pathways. These pathways are important for cell signaling and membrane transport processes. Glycophorin A's role in erythrocyte development is connected to protein 4.1R which links the membrane to the underlying cytoskeleton influencing red blood cell shape and stability. Additionally its role in lipid raft-mediated signaling intersects with proteins involved in immune response regulation.
Associated diseases and disorders	Glycophorin A has associations with several conditions including malaria and hereditary spherocytosis. The interaction between Plasmodium falciparum and Glycophorin A contributes to the parasite's ability to invade erythrocytes indicating its relevance in malaria research. Additionally abnormalities with Glycophorin A expression or structure can lead to hereditary spherocytosis often related to a disruption in its interaction with ankyrin another structural protein. Understanding these associations helps elucidate the pathological mechanisms and potential therapeutic targets for these diseases.

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

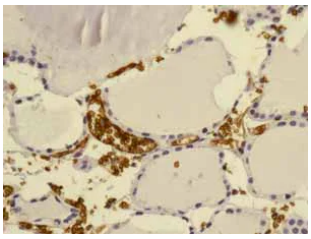
We do not recommend this combination. It is not covered by our product promise.

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.

10 product images



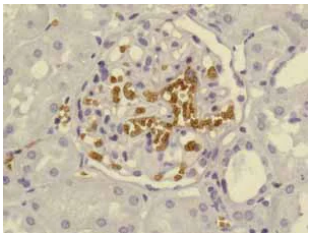
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glycophorin A antibody [EPR8200] - BSA and Azide free (ab218372)

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

ab129024, unpurified, showing positive staining in Thyroid gland erythrocytes tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129024).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



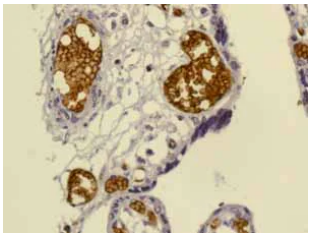
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glycophorin A antibody [EPR8200] - BSA and Azide free (ab218372)

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

ab129024, unpurified, showing positive staining in Normal kidney erythrocytes tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129024).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



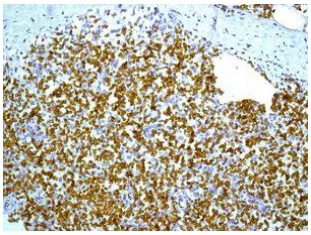
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glycophorin A antibody [EPR8200] - BSA and Azide free (ab218372)

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

ab129024, unpurified, showing positive staining in Normal placenta erythrocytes tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129024).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

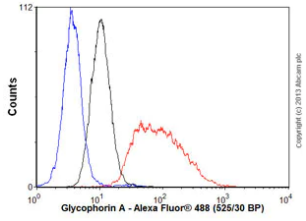


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glycophorin A antibody [EPR8200] - BSA and Azide free (ab218372)

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

ab129024, unpurified, at 1/100 dilution staining Glycophorin A in formalin fixed paraffin embedded Human spleen tissue by immunohistochemistry.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129024).

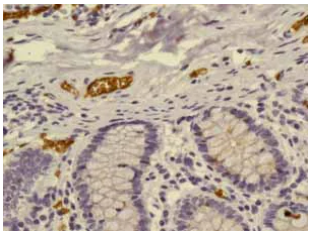
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Glycophorin A antibody [EPR8200] - BSA and Azide free (ab218372)

Glycophorin A Flow Cytometry (Intracellular) staining using rabbit Anti-Glycophorin A antibody

Overlay histogram showing K562 cells stained with unpurified ab129024 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab129024, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129024).



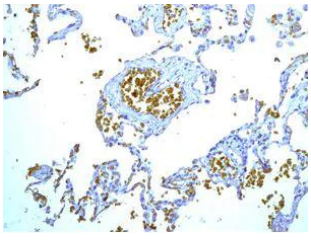
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glycophorin A antibody [EPR8200] - BSA and Azide free (ab218372)

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

ab129024, unpurified, showing positive staining in Normal colon erythrocytes tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129024).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

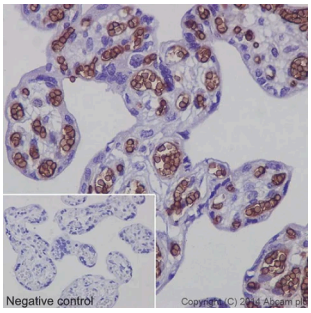


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glycophorin A antibody [EPR8200] - BSA and Azide free (ab218372)

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

ab129024, at 1/100 dilution staining Glycophorin A in formalin fixed paraffin embedded Human lung tissue by immunohistochemistry.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129024).

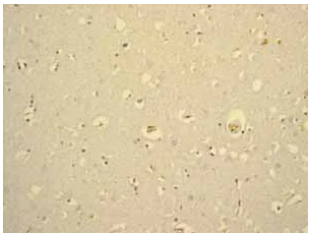
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glycophorin A antibody [EPR8200] - BSA and Azide free (ab218372)

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

ab129024 staining Glycophorin A in Human placenta tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed and paraffin-embedded, antigen retrieval was by heat mediation in Tris/EDTA buffer pH9. Samples were incubated with primary antibody (1/2500). ab97051(1/500) HRP-conjugated goat anti-rabbit IgG(H&L) was used as the secondary antibody. Tissue counterstained with Hematoxylin. PBS was used in the negative control rather than the Primary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129024).

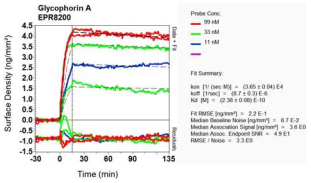


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glycophorin A antibody [EPR8200] - BSA and Azide free (ab218372)

ab129024, unpurified, showing negative staining in Normal brain tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129024).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



OI-RD Scanning - Anti-Glycophorin A antibody [EPR8200] - BSA and Azide free (ab218372)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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