abcam

Product datasheet

Anti-Glycophorin A + B antibody [HIR2] ab15009

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Overview

Product name	Anti-Glycophorin A + B antibody [HIR2]
Description	Mouse monoclonal [HIR2] to Glycophorin A + B
Host species	Mouse
Specificity	The antibody recognizes N-terminal, homologous portion of glycophorins A (GPA) and B (GPB), (strongly to GPA, and weakly to GPB). The antibody is useful in erythroid cell development studies, because HIR2 antigen is expressed on early erythroblasts, late erythroblasts, erythroblasts, mature erythrocytes and the cells of erythroid cell lines K562 and HEL, but not on all other cells (mature erythrocytes are characteristically CD235a positive and CD45 and CD71 negative).
Tested applications	**Suitable for:** Flow Cyt, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to Human Glycophorin A + B (N terminal).
Positive control	FACS: peripheral blood leukocytes
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.097% Sodium azide Constituent: PBS
Purity	Protein G purified
Purification notes	Purified from TCS

Clonality	Monoclonal
Clone number	HIR2
Isotype	IgG2b

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab15009 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

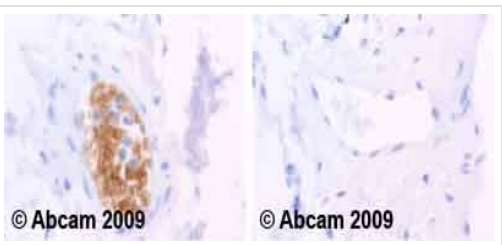
Application	Abreviews	Notes
Flow Cyt		Use 1µg for 10^6 cells. **ab170192** - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.
IHC-P	★★★★★ (1)	Use at an assay dependent concentration.

Target

Relevance Glycophorins A (GYPA) and B (GYPB) are major sialoglycoproteins of the human erythrocyte membrane which bear the antigenic determinants for the MN and Ss blood groups. GYPA gene consists of 7 exons and has 97% sequence homology with GYPB from the 5' UTR to the coding sequence encoding the first 45 amino acids. GYPB accounts for S, s and U specificities. GPA and GPB provide the cells with a large mucin-like surface and it has been suggested this provides a barrier to cell fusion, so minimizing aggregation between red blood cells in the circulation. In addition to the M or N and S or s antigens, that commonly occur in all populations, about 40 related variant phenotypes have been identified. These variants include all the variants of the Miltenberger complex and several isoforms of Sta; also, Dantu, Sat, He, Mg, and deletion variants Ena, S-s-U- and Mk. Most of the variants are resulted from gene recombinations between GYPA and GYPB. These antigens are expressed on early erythroblasts, late erythroblasts, erythroblasts, mature erythrocytes and the cells of erythroid cell lines K562 and HEL, but not on all other cells (mature erythrocytes are characteristically CD235a positive and CD45 and CD71 negative).

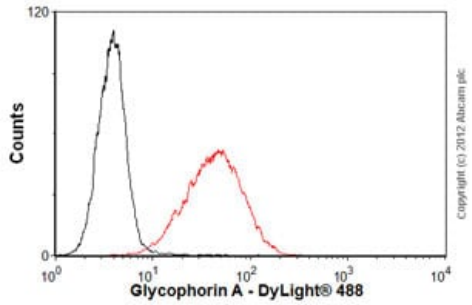
Cellular localization Type I membrane protein.

Images



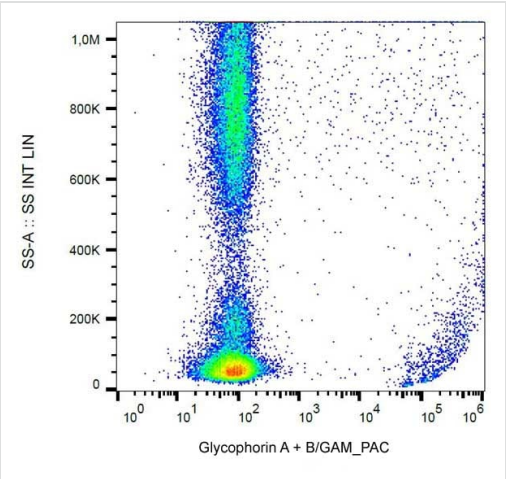
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glycophorin A + B antibody [HIR2] (ab15009)

ab15009 staining Human normal lung tissue. Staining is localised to cellular membranes. Left panel: with primary antibody at 1 µg/ml. Right panel: isotype control. Sections were stained using an automated system DAKO Autostainer Plus, at RT. Sections were rehydrated and antigen retrieved with the Dako 3-in-1 antigen retrieval buffer citrate pH 6.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 mins followed by blocking with Dako Protein block for 10 mins (containing casein 0.25% in PBS) then incubated with primary antibody for 20 mins and detected with Dako Envision Flex amplification kit for 30 mins. Colorimetric detection was completed with DAB for 5 mins. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.



Flow Cytometry - Anti-Glycophorin A + B antibody [HIR2] (ab15009)

Overlay histogram showing K562 cells stained with ab15009 (red line). The cells were fixed with 4% paraformaldehyde (10 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 (ab15009, 1µg/1x106 cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (**ab91366**, 2µg/1x106 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in K562 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Flow Cytometry - Anti-Glycophorin A + B antibody [HIR2] (ab15009)

Flow cytometry analysis of human peripheral blood cells labelling Glycophorin A + B with ab15009. A APC-conjugated goat anti-mouse IgG was used as the secondary antibody.

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