

Glycophorin A (NaM10-6G4): sc-51737

BACKGROUND

Glycophorins A, B and C are sialoglycoproteins of the human erythrocyte membrane, which bear the antigenic determinants for the MN, Ss and Gerbich blood groups, respectively. Glycophorins span the membrane once and present their amino-terminal end to the extracellular surface of the human erythrocyte. The genetic array of expressed glycophorin surface antigens on erythrocytes defines the blood group phenotype of the individual. The human Glycophorin A gene maps to chromosome 4q31.21, contains 7 exons which are 97% homologous to Glycophorin B, and encodes a 150 amino acid protein. The human Glycophorin B gene maps to chromosome 4q31.21 and encodes a 91 amino acid protein. The human Glycophorin C gene maps to chromosome 2q14.3 and contains four exons. Glycophorin C transcript can generate two protein isoforms. Isoform 1 includes all 4 exons and encodes the full length 128 amino acid protein. Isoform 2 is missing exon 2 and encodes a 109 amino acid protein, which specifies the Yus subtype of the Gerbich phenotype.

REFERENCES

- Andersson, L.C., et al. 1979. Glycophorin A as a cell surface marker of early erythroid differentiation in acute leukemia. *Int. J. Cancer* 23: 717-720.
- Liszka, K., et al. 1983. Glycophorin A expression in malignant hematopoiesis. *Am. J. Hematol.* 15: 219-226.
- Nakahata, T., et al. 1994. Cell surface antigen expression in human erythroid progenitors: erythroid and megakaryocytic markers. *Leuk. Lymphoma* 13: 401-409.
- Sadahira, Y., et al. 1999. Immunohistochemical identification of erythroid precursors in paraffin embedded bone marrow sections: spectrin is a superior marker to glycophorin. *J. Clin. Pathol.* 52: 919-921.

CHROMOSOMAL LOCATION

Genetic locus: GYPA (human) mapping to 4q31.21.

SOURCE

Glycophorin A (NaM10-6G4) is a mouse monoclonal antibody raised against Glycophorin A of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Glycophorin A (NaM10-6G4) is available conjugated to agarose (sc-51737 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-51737 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-51737 PE), fluorescein (sc-51737 FITC), Alexa Fluor® 488 (sc-51737 AF488), Alexa Fluor® 546 (sc-51737 AF546), Alexa Fluor® 594 (sc-51737 AF594) or Alexa Fluor® 647 (sc-51737 AF647), 200 µg/ml, for WB (RGG), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-51737 AF680) or Alexa Fluor® 790 (sc-51737 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Glycophorin A (NaM10-6G4) is recommended for detection of Glycophorin A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for Glycophorin A siRNA (h): sc-42882, Glycophorin A shRNA Plasmid (h): sc-42882-SH and Glycophorin A shRNA (h) Lentiviral Particles: sc-42882-V.

Molecular Weight of Glycophorin A head-head dimer: 16 kDa.

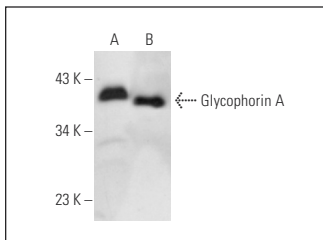
Molecular Weight of Glycophorin A head-tail dimer: 38 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, SK-N-SH cell lysate: sc-2410 or human PBL whole cell lysate.

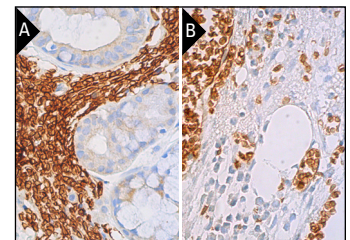
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Glycophorin A (NaM10-6G4): sc-51737. Western blot analysis of Glycophorin A expression in K-562 (A) and human PBL (B) whole cell lysates.



Glycophorin A (NaM10-6G4): sc-51737. Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing membrane staining of erythrocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing membrane staining of erythrocytes (B).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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