SANTA CRUZ BIOTECHNOLOGY, INC.

Glycophorin A (JC159): sc-53295

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 seven exons which are 97% homologous to Glycophorin B and encodes a 150 amino acid protein. The human Glycophorin B gene maps to chromosome 4q28-q31 and encodes a 91 amino acid protein. The human Glycophorin C gene maps to chromosome 2q14-q21 and contains four exons. Glycophorin C transcript can generate two protein isoforms. Isoform 1 includes all four 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.

REFERENCE

1. 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.
2. Liszka, K., et al. 1983. Glycophorin A expression in malignant hematopoiesis. Am. J. Hematol. 15: 219-226.
3. Nakahata, T., et al. 1994. Cell surface antigen expression in human erythroid progenitors: erythroid and megakaryocytic markers. Leuk. Lymphoma 13: 401-409.
4. 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.
5. Gerber, D., et al. 2001. *In vivo* detection of hetero-association of Glycophorin A and its mutants within the membrane. J. Biol. Chem. 276: 31229-31232.

CHROMOSOMAL LOCATION

Genetic locus: GYPA (human) mapping to 4q31.21; Gypa (mouse) mapping to 8 C2.

SOURCE

Glycophorin A (JC159) is a mouse monoclonal antibody raised against membrane preparation from splenic hairy cell leukaemia cells of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Glycophorin A (JC159) is available conjugated to agarose (sc-53295 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-53295 PE), fluorescein (sc-53295 FITC), Alexa Fluor® 488 (sc-53295 AF488), Alexa Fluor® 546 (sc-53295 AF546), Alexa Fluor® 594 (sc-53295 AF594) or Alexa Fluor® 647 (sc-53295 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53295 AF680) or Alexa Fluor® 790(sc-53295 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Glycophorin A (JC159) is recommended for detection of Glycophorin A of mouse, rat and 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

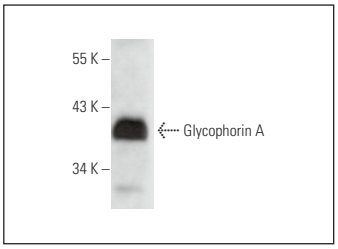
Suitable for use as control antibody for Glycophorin A siRNA (h): sc-42882, Glycophorin A siRNA (m): sc-44730, Glycophorin A shRNA Plasmid (h): sc-42882-SH, Glycophorin A shRNA Plasmid (m): sc-44730-SH, Glycophorin A shRNA (h) Lentiviral Particles: sc-42882-V and Glycophorin A shRNA (m) Lentiviral Particles: sc-44730-V.

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

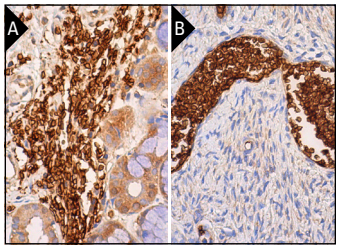
Molecular Weight of Glycophorin A head-tail dimers: 38 kDa.

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

DATA



Glycophorin A (JC159): sc-53295. Western blot analysis of Glycophorin A expression in K-562 whole cell lysate.



Glycophorin A (JC159): sc-53295. Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing membrane staining of erythrocytes cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human blood vessel showing membrane staining of erythrocytes (**B**).

SELECT PRODUCT CITATIONS

1. Tommila, M., et al. 2010. Hemoglobin expression in rat experimental granulation tissue. J. Mol. Cell Biol. 3: 190-196.
2. Shishkova, D., et al. 2022. Calciprotein particles cause physiologically significant pro-inflammatory response in endothelial cells and systemic circulation. Int. J. Mol. Sci. 23: 14941.
3. Martínez-Vieyra, I., et al. 2024. Oxidative stress and cytoskeletal reorganization in hypertensive erythrocytes. Antioxidants 14: 5.

STORAGE

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

RESEARCH USE

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