SANTA CRUZ BIOTECHNOLOGY, INC.

Glycophorin A (I-20): sc-19453

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 4q28.2-q31.1, 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 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 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

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.

CHROMOSOMAL LOCATION

Genetic locus: Gypa (mouse) mapping to 8 C2.

SOURCE

Glycophorin A (I-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of Glycophorin A of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-19453 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Glycophorin A (I-20) is recommended for detection of Glycophorin A of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

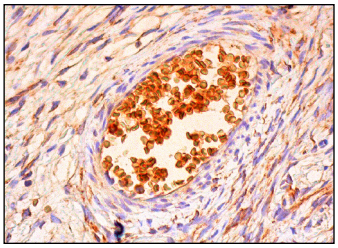
Molecular Weight of Glycophorin A head-head dimer: 16 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Glycophorin A (I-20): sc-19453. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing membrane staining of erythrocytes.

SELECT PRODUCT CITATIONS

1. Osei-Asante, S., et al. 2010. One-step direct reconstitution of biomembranes onto cationic organic polymer bead supports. J. Colloid Interface Sci. 351: 96-101.