

Glycophorin C/D (D-20): sc-23809

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 4q31.22, contains 7 exons which are 97% homologous to Glycophorin B and encodes a 150 amino acid protein. The human Glycophorin B gene also maps to chromosome 4q31.22 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 Glycophorin C protein. Isoform 2, also known as Glycophorin D, is missing exon 2 and encodes a 109 amino acid protein, which specifies the Yus subtype of the Gerbich phenotype.

REFERENCES

1. Chang, S.H., et al. 2001. Regulation of the Glycophorin C-protein 4.1 membrane-to-skeleton bridge and evaluation of its contribution to erythrocyte membrane stability. *J. Biol. Chem.* 276: 22223-22230.
2. 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.
3. Lobo, C.A., et al. 2003. Glycophorin C is the receptor for the Plasmodium falciparum erythrocyte binding ligand PfEBP-2 (baeb1). *Blood* 101: 4628-4631.
4. Young, M.T., et al. 2003. Distinct regions of human Glycophorin A enhance human red cell anion exchanger (band 3; AE1) transport function and surface trafficking. *J. Biol. Chem.* 278: 32954-32961.

CHROMOSOMAL LOCATION

Genetic locus: GYPC (human) mapping to 2q14.3.

SOURCE

Glycophorin C/D (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Glycophorin C of human 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-23809 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.

APPLICATIONS

Glycophorin C/D (D-20) is recommended for detection of Glycophorin C and D of human 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 C siRNA (h): sc-42884, Glycophorin C shRNA Plasmid (h): sc-42884-SH and Glycophorin C shRNA (h) Lentiviral Particles: sc-42884-V.

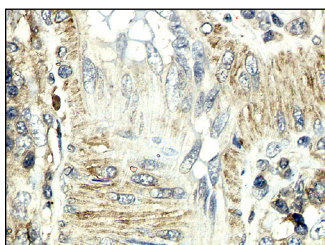
Molecular Weight of Glycophorin C: 40 kDa.

Molecular Weight of Glycophorin D: 30 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 C/D (D-20): sc-23809. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane localization.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.