

Glycophorin C/D (H-85): sc-20629

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 (baebl). *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.
5. Overton, M.C., et al. 2003. Oligomerization, biogenesis, and signaling is promoted by a Glycophorin A-like dimerization motif in transmembrane domain 1 of a yeast G protein-coupled receptor. *J Biol Chem* 278: 49369-49377.

CHROMOSOMAL LOCATION

Genetic locus: GYPC (human) mapping to 2q14-q21.

SOURCE

Glycophorin C/D (H-85) is a rabbit polyclonal antibody raised against amino acids 1-85 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.

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 (H-85) 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), 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 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.

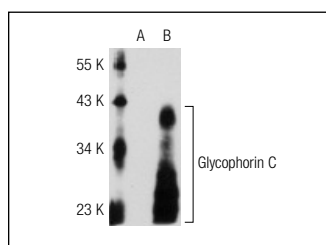
Molecular Weight of Glycophorin D: 30 kDa.

Positive Controls: TF-1 cell lysate: sc-2412, K-562 whole cell lysate: sc-2203 or Glycophorin C (h): 293T Lysate: sc-111667.

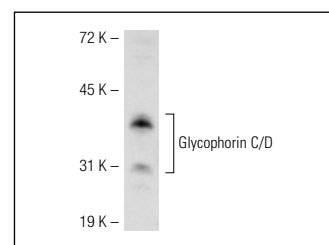
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotting A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Glycophorin C/D (H-85): sc-20629. Western blot analysis of Glycophorin C expression in non-transfected: sc-117752 (A) and human Glycophorin C transfected: sc-111667 (B) 293T whole cell lysates.



Glycophorin C/D (H-85): sc-20629. Western blot analysis of Glycophorin C/D expression in K-562 whole cell lysate.

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.