SANTA CRUZ BIOTECHNOLOGY, INC.

Glycophorin C (BRIC10): sc-59183

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 also 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 four 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.

CHROMOSOMAL LOCATION

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

SOURCE

Glycophorin C (BRIC10) is a mouse monoclonal antibody raised against erythrocytes 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 C (BRIC10) is available conjugated to either phycoerythrin (sc-59183 PE) or fluorescein (sc-59183 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Glycophorin C (BRIC10) is recommended for detection of Glycophorin C 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)] and flow cytometry (1 µg per 1 x 10^6 cells).

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.

Positive Controls: Glycophorin C (h): 293T Lysate: sc-111667, K-562 whole cell lysate: sc-2203 or HEL 92.1.7 cell lysate: sc-2270.

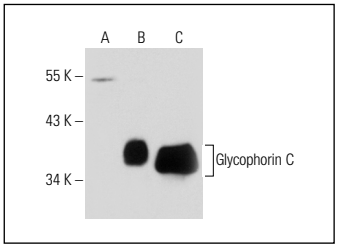
RECOMMENDED SUPPORT REAGENTS

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).

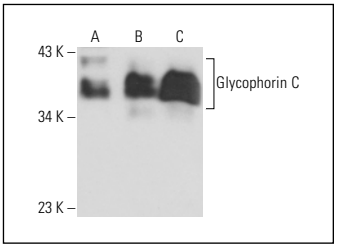
STORAGE

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

DATA



Glycophorin C (BRIC10): sc-59183. Western blot analysis of Glycophorin C expression in non-transfected 293T: sc-117752 (**A**), human Glycophorin C transfected 293T: sc-111667 (**B**) and K-562 (**C**) whole cell lysates.



Glycophorin C (BRIC10): sc-59183. Western blot analysis of Glycophorin C expression in TF-1 (**A**), HEL 92.1.7 (**B**) and K-562 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Domingues, C.C., et al. 2009. Resistance of human erythrocyte membranes to Triton X-100 and C12E8. J. Membr. Biol. 227: 39-48.
2. Domingues, C.C., et al. 2010. Effect of cholesterol depletion and temperature on the isolation of detergent-resistant membranes from human erythrocytes. J. Membr. Biol. 234: 195-205.
3. Ciana, A., et al. 2011. On the association of lipid rafts to the spectrin skeleton in human erythrocytes. Biochim. Biophys. Acta 1808: 183-190.
4. Ciana, A., et al. 2013. Freely turning over palmitate in erythrocyte membrane proteins is not responsible for the anchoring of lipid rafts to the spectrin skeleton: a study with bio-orthogonal chemical probes. Biochim. Biophys. Acta 1828: 924-931.
5. Huang, N.J., et al. 2017. Genetically engineered red cells expressing single domain camelid antibodies confer long-term protection against botulinum neurotoxin. Nat. Commun. 8: 423.
6. Proto, W.R., et al. 2019. Adaptation of *Plasmodium falciparum* to humans involved the loss of an ape-specific erythrocyte invasion ligand. Nat. Commun. 10: 4512.
7. Kim, K.M., et al. 2024. The acute phase reactant orosomucoid-2 directly promotes rheumatoid inflammation. Exp. Mol. Med. 56: 890-903.

RESEARCH USE

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

PROTOCOLS

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