

# Glycophorin C (3H2009): sc-71161

## 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 two and encodes a 109 amino acid protein, which specifies the Yus subtype of the Gerbich phenotype.

## REFERENCES

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- 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.
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- 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.
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- Bruce, L.J., et al. 2004. Altered structure and anion transport properties of band 3 (AE1, SLC4A1) in human red cells lacking Glycophorin A. *J. Biol. Chem.* 279: 2414-2420.
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## CHROMOSOMAL LOCATION

Genetic locus: GYPC (human) mapping to 2q14.3; Gypc (mouse) mapping to 18 B1.

## SOURCE

Glycophorin C (3H2009) is a mouse monoclonal antibody raised against erythrocytes of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Glycophorin C (3H2009) is available conjugated to either phycoerythrin (sc-71161 PE) or fluorescein (sc-71161 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

## APPLICATIONS

Glycophorin C (3H2009) is recommended for detection of Glycophorin C 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)] and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for Glycophorin C siRNA (h): sc-42884, Glycophorin C siRNA (m): sc-145455, Glycophorin C shRNA Plasmid (h): sc-42884-SH, Glycophorin C shRNA Plasmid (m): sc-145455-SH, Glycophorin C shRNA (h) Lentiviral Particles: sc-42884-V and Glycophorin C shRNA (m) Lentiviral Particles: sc-145455-V.

Molecular Weight of Glycophorin C: 40 kDa.

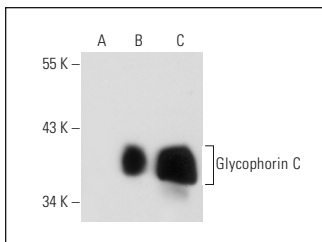
Molecular Weight of Glycophorin D: 30 kDa.

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.

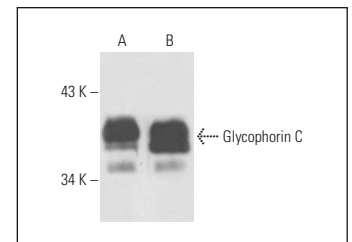
## RECOMMENDED SUPPORT REAGENTS

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).

## DATA



Glycophorin C (3H2009): sc-71161. 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 (3H2009): sc-71161. Western blot analysis of Glycophorin C expression in HEL 92.1.7 (A) and K-562 (B) whole cell lysates.

## STORAGE

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