

# Glycophorin A (E4): sc-59181

## 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 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 protein. Isoform 2 is missing exon two and encodes a 109 amino acid protein, which specifies the Yus subtype of the Gerbich phenotype.

## CHROMOSOMAL LOCATION

Genetic locus: GYP A (human) mapping to 4q31.21.

## SOURCE

Glycophorin A (E4) is a mouse monoclonal antibody raised against thymus of human origin.

## PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Glycophorin A (E4) is available conjugated to either phycoerythrin (sc-59181 PE) or fluorescein (sc-59181 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

## STORAGE

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

## APPLICATIONS

Glycophorin A (E4) is recommended for detection of red blood cell Glycophorin A 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 flow cytometry (1 µg per 1 x 10<sup>6</sup> cells); non cross-reactive with Glycophorin B and trypsinised cells.

Suitable for use as control antibody for Glycophorin A siRNA (h): sc-42882, Glycophorin A shRNA Plasmid (h): sc-42882-SH and Glycophorin A shRNA (h) Lentiviral Particles: sc-42882-V.

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

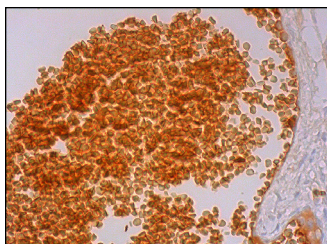
Molecular Weight of Glycophorin A head-tail dimer: 38 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410 or K-562 whole cell lysate: sc-2203.

## 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) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 3) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Glycophorin A (E4): sc-59181. Immunoperoxidase staining of formalin fixed, paraffin-embedded human blood vessel tissue showing membrane staining of erythrocytes.

## SELECT PRODUCT CITATIONS

1. Bowyer, P.W., et al. 2015. Variation in *Plasmodium falciparum* erythrocyte invasion phenotypes and merozoite ligand gene expression across different populations in areas of malaria endemicity. *Infect. Immun.* 83: 2575-2582.
2. Awandare, G.A., et al. 2018. *Plasmodium falciparum* strains spontaneously switch invasion phenotype in suspension culture. *Sci. Rep.* 8: 5782.
3. Thiam, L.G., et al. 2021. Blood donor variability is a modulatory factor for *P. falciparum* invasion phenotyping assays. *Sci. Rep.* 11: 7129.
4. Bertozzi, G., et al. 2021. Wound vitality in decomposed bodies: new frontiers through immunohistochemistry. *Front. Med.* 8: 802841.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **Glycophorin A (R10): sc-53905** for Glycophorin A antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.