



Blood Group Wrb (BRIC14): sc-59476

BACKGROUND

Blood-group antigens are generally defined as molecules formed by sequential addition of saccharides to the carbohydrate side chains of lipids and proteins detected on erythrocytes and certain epithelial cells. The A, B and H antigens are reported to undergo modulation during malignant cellular transformation. Blood group related antigens are usually mucin-type and are detected on erythrocytes, certain epithelial cells and in secretions of certain individuals. The Wright (Wr) blood group antigens include Wra and Wrb and are encoded by alleles of the same gene. The Wrb antigen involves both red blood cell (RBC) band 3 and glycophorin A (GPA).

REFERENCES

1. Ridgwell, K., et al. 1985. The Wrb antigen in Sta-positive and Dantu-positive human erythrocytes. *J. Immunogenet.* 11: 365-370.
2. Hermentin, P., et al. 1985. Wright (a + b-) human erythrocytes and *Plasmodium falciparum* malaria. *Blut* 50: 75-80.
3. Tweedy, C.J., et al. 1987. Effect of pentoxifylline on Wrb antigen. *Transfusion* 27: 325-329.
4. Wren, M.R. and Issitt, P.D. 1988. Evidence that Wra and Wrb are antithetical. *Transfusion* 28: 113-118.
5. Telen, M.J. and Chasis, J.A. 1990. Relationship of the human erythrocyte Wrb antigen to an interaction between glycophorin A and band 3. *Blood* 76: 842-848.
6. Bruce, L.J., et al. 1995. Changes in the Blood Group Wright antigens are associated with a mutation at amino acid 658 in human erythrocyte band 3: a site of interaction between band 3 and glycophorin A under certain conditions. *Blood* 85: 541-547.
7. Ring, S.M., et al. 1995. Comparative immunochemical analysis of Wra and Wrb red cell antigens. *Vox Sang.* 67: 226-230.
8. Huang, C.H., et al. 1996. Human red blood cell Wright antigens: a genetic and evolutionary perspective on glycophorin A-band 3 interaction. *Blood* 87: 3942-3947.
9. Poole, J., et al. 1999. Glycophorin A mutation Ala 65 Pro gives rise to a novel pair of MNS alleles ENEP (MNS39) and HAG (MNS41) and altered Wrb expression: direct evidence for GPA/band 3 interaction necessary for normal Wrb expression. *Transfus. Med.* 9: 167-174.

CHROMOSOMAL LOCATION

Genetic locus: WRB (human) mapping to 21q22.2; Get1 (mouse) mapping to 16 C4.

SOURCE

Blood Group Wrb (BRIC14) is a mouse monoclonal antibody raised against a cell preparation of native erythrocytes of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blood Group Wrb (BRIC14) is available conjugated to either phycoerythrin (sc-59476 PE) or fluorescein (sc-59476 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

APPLICATIONS

Blood Group Wrb (BRIC14) is recommended for detection of Blood Group Wrb erythrocytes of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) 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.

SELECT PRODUCT CITATIONS

1. Azouzi, S., et al. 2015. The human Kell blood group binds the erythroid 4.1R protein: new insights into the 4.1R-dependent red cell membrane complex. *Br. J. Haematol.* 171: 862-871.

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.