SANTA CRUZ BIOTECHNOLOGY, INC.

Blood Group A1, A2, A3 antigen (Z2B-1): sc-52367

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Sixteen genetically and biosynthetically distinct but inter-related specificities belong to this group of antigens, including A (1 and 2), B, H (1 and 2), M, N, Lewis A, Lewis B, Lewis X, Lewis Y, and precursor type 1 chain antigens.

REFERENCES

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2. Donald, A.S. 1982. A-active trisaccharides isolated from A1 and A2 blood-group-specific glycoproteins. Eur. J. Biochem. 120: 243-249.
3. Donald, A.S. 1982. Trisaccharides from blood group A1 and A2 mucous glycoproteins. Adv. Exp. Med. Biol. 144: 49-51.
4. Staub Nielsen, L., et al. 1983. Another case of a lymphocytotoxic antibody with blood group A1 Leb and A Led associated specificity. Tissue Antigens 21: 177-183.
5. Clausen, H., et al. 1985. Repetitive A epitope (type 3 chain A) defined by blood group A1-specific monoclonal antibody TH-1: chemical basis of qualitative A1 and A2 distinction. Proc. Natl. Acad. Sci. USA 82: 1199-1203.
6. Julmy, F., et al. 2003. PLTs of blood group A1 donors express increased surface A antigen owing to apheresis and prolonged storage. Transfusion 43: 1378-1385.
7. Chung, W.Y., et al. 2005. Enhanced invasion of blood group A1 erythrocytes by *Plasmodium falciparum*. Mol. Biochem. Parasitol. 144: 128-130.
8. Breimer, M.E., et al. 2006. Blood group A and B antigen expression in human kidneys correlated to A1/A2/B, Lewis, and secretor status. Transplantation 82: 479-485.
9. Samuelsson, B.E., et al. 2006. Structural characterization of blood group A glycolipids in blood group A liver tissue *in situ* perfused with O blood: the dominating presence of type 1 core chain A antigens. Xenotransplantation 13: 160-165.

CHROMOSOMAL LOCATION

Genetic locus: ABO (human) mapping to 9q34.2.

SOURCE

Blood Group A1, A2, A3 antigen (Z2B-1) is a mouse monoclonal antibody raised against blood antigen A1, A2 and A3 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

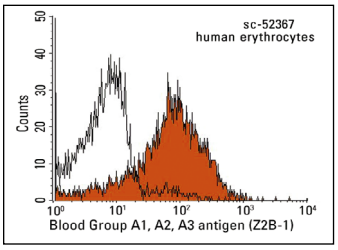
Each vial contains 100 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blood Group A1, A2, A3 antigen (Z2B-1) is available conjugated fluorescein (sc-52367 FITC, 100 tests in 2 ml), for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Blood Group A1, A2, A3 antigen (Z2B-1) is recommended for detection of Blood Groups A1, A2 and A3 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 flow cytometry (1 µg per 1 x 10^6 cells).

DATA



Blood Group A1, A2, A3 antigen (Z2B-1): sc-52367. Indirect FCM analysis of human erythrocytes stained with Blood Group A1, A2, A3 antigen (Z2B-1), followed by PE-conjugated goat anti-mouse IgM: sc-3768. Black line histogram represents the isotype control, normal mouse IgM: sc-3881.

SELECT PRODUCT CITATIONS

1. Lindberg, L., et al. 2011. Is there a clinical need for a diagnostic test allowing detection of chain type-specific anti-A and anti-B? Transfusion 51: 494-503.
2. Manich, G., et al. 2014. Presence of a neo-epitope and absence of amyloid β and Tau protein in degenerative hippocampal granules of aged mice. Age 36: 151-165.
3. Hedberg, P., et al. 2021. Red blood cell blood group A antigen level affects the ability of heparin and PfEMP1 antibodies to disrupt *Plasmodium falciparum* rosettes. Malar. J. 20: 441.

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.