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Mouse anti CD65s, conjugated to FITC

 nordicmubio.com/products/Mouse-anti-CD65s-conjugated-to-FITC/GM-4102

Catalog number: **GM-4102**

Clone	VIM2
Isotype	IgM
Product Type	Primary Antibodies
Units	2ml (100 Tests)
Host	Mouse
Species Reactivity	Human
Application	Direct Immunofluorescence Flow Cytometry Immunofluorescence

Background

The epitope recognized by antibody VIM2 is expressed by virtually all myeloid cells including normal and malignant granulocytes and monocytes. In normal myelopoiesis VIM2 can first be detected after the late CFU-GM stage. In acute myeloid leukemias (AMLs) in vitro clonogenic progenitors seem to aberrantly express the VIM2 antigen. A variety of studies have demonstrated the usefulness and reliability of VIM2 as a marker molecule for the classification of acute leukemias. Recently, the signal transducing capacity of VIM2 bearing surface molecules has been demonstrated. The VIM2 antibody permits the identification and enumeration of normal and leukemic cell populations expressing the VIM2 antigen present in human biological samples (blood, bone marrow and others) using flow cytometry. Furthermore, VIM2 mAb is suitable for the elimination of myeloid cells from complex cell mixtures as well as for functional studies. (Lund-Johansen et al.) Results must be put within the context of other diagnostic tests as well as the clinical history of the patient by a certified professional before final interpretation. Analyses performed with this antibody should be paralleled by positive and negative controls. If unexpected results are obtained which cannot be attributed to differences in laboratory procedures, please contact us.

Source

VIM2 was produced after immunization of mice with an extract of THP-1, a monocytic cell line derived from a patient with acute monocytic leukemia.

Product

2 ml of FITC-conjugated anti CD65s (clone VIM2) in PBS pH 7.2, 1% BSA, and 0.05% NaN₃, approximately 100 tests.

Product Form: FITC

Formulation: PBS pH 7.2, 1% BSA, 0.05% NaN₃

Specificity

Antibody VIM2 reacts with a carbohydrate structure expressed by myeloid cells. The epitope recognized was shown by Macher et al. to involve a defined sialofucooligosaccharide sequence. Similar results were obtained by Kniep et al.. Together with other sialylated and fucosylated polylactosamines the carbohydrate structure recognized by VIM2 may play a critical role on the adhesion of granulocytes and monocytes to endothelium and platelets during inflammation and clotting. The sensitivity of VIM2 mAb is determined by staining well-defined blood samples from representative donors with serial-fold mAb dilutions to obtain a titration curve that allows relating the mAb concentration to the percentage of stained cells and geometric MFI (mean fluorescence intensity). For this purpose, a mAb-concentration range is selected to include both the saturation point (i.e. the mAb dilution expected to bind all epitopes on the target cell) and the detection threshold (i.e. the mAb dilution expected to represent the least amount of mAb needed to detect an identical percentage of cells). In practice, 50ul of leukocytes containing 10⁷ cells/ml are stained with 20ul mAb of various dilutions to obtain a titration curve and to identify the saturation point and detection threshold. The final concentration of the product is then adjusted to be at least three-fold above the detection threshold. In addition and to control lot-to-lot variation, the given lot is compared and adjusted to fluorescence standards with defined intensity.

Applications

Staining Procedure Direct Immunofluorescence (Staining Procedure) Nordic-MUbio fluorochrome labeled antibodies are designed for use with either whole blood or isolated mononuclear cell (MNC) preparations. Proposed staining procedure for whole blood in short: - For each sample add 50 µl of EDTA anti-coagulated blood to a 3-5 ml tube - Add 20 µl of the appropriate Nordic-MUbio monoclonal antibody conjugate - Incubate the tube for 15 minutes at 4°C or at room temperature in the dark - Add 100 µl NM-LYSE (Cat.No. GAS-003) to each tube and incubate for 10 minutes at room temperature - Add 3-4 ml of distilled water and vortex, incubate for 5-10 minutes at room temperature - Centrifuge tube for 5 minutes at 300 g - Aspirate supernatant and resuspend pellet in 0.3 ml of sheath fluid - Analyze immediately or store samples at 2-8° C in the dark and analyze within 24 hours For "No-Wash" protocol please refer to www.nordicmubio.com Proposed staining procedure for MNC in short: - Carefully add 20 µl antibody conjugate and 50-100

µl MNC to the bottom of a tube - Vortex at low speed for 1-2 seconds - Incubate for 15-30 minutes at 2-8°C or at room temperature - Centrifuge tubes for 5 minutes at 300 g - Remove supernatant, resuspend cells in 2-5 ml of phosphate buffered saline (PBS) and centrifuge cells again for 5 minutes at 300 g - Remove supernatant and resuspend cells in sheath fluid for immediate analysis or resuspend cells in 0.5 ml 1 % formaldehyde and store them at 2-8°C in the dark. Analyze fixed cells within 24 hours Indirect Immunofluorescence (Staining Procedure) - Mix 20 µl Nordic-MUBio purified antibody with 50 µl whole blood or MNC suspension - Incubate for 15 minutes at 2-8°C - Wash cells with phosphate buffered saline (PBS) - Add to cell pellet 20 µl of affinity purified, fluorochrome labeled F(ab')₂ anti mouse Ig antibodies - Incubate for 15 minutes at 2-8°C - Wash cells with phosphate buffered saline (PBS) or proceed as described for direct staining

Storage

Nordic-MUBio monoclonal antibody reagents contain optimal concentrations of affinity-purified antibody. For stability reasons this monoclonal antibody solution contains sodium azide. These reagents should be stored at 2-8°C (DO NOT FREEZE!) and protected from prolonged exposure to light. If a slight precipitation occurs upon storage, this should be removed by centrifugation. It will not affect the performance or the concentration of the product. Stability of the reagent: Please refer to the expiry date printed onto the vial. The use of the reagent after the expiration date is not recommended.

Caution

This product is intended FOR RESEARCH USE ONLY, and FOR TESTS IN VITRO, not for use in diagnostic or therapeutic procedures involving humans or animals. It may contain hazardous ingredients. Please refer to the Safety Data Sheets (SDS) for additional information and proper handling procedures. Dispose product remainders according to local regulations. This datasheet is as accurate as reasonably achievable, but Exalpha Biologicals accepts no liability for any inaccuracies or omissions in this information.

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Warranty

The products sold hereunder are warranted only to conform to the quantity and contents stated on the label at the time of delivery to the customer. There are no warranties, expressed or implied, that extend beyond the description on the label of the product. Exalpa`s sole liability is limited to either replacement of the products or refund of the purchase price. Exalpa is not liable for property damage, personal injury, or economic loss caused by the product.

Safety Datasheet(s) for this product:

NM_ Sodium Azide



Figure 1. Flow cytometric analysis of a normal blood sample after immunostaining with GM-4102 (CD65s-FITC).



Figure 2. Flow cytometric analysis of a normal blood sample after immunostaining with GM-4102 (CD65s-FITC).