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Mouse anti CD14, conjugated to FITC

 nordicmubio.com/products/Mouse-anti-CD14-conjugated-to-FITC/GM-4092

Catalog number: **GM-4092**

Clone	MEM18
Isotype	IgG1
Product Type	Primary Antibodies
Units	2ml (100 Tests)
Host	Mouse
Species Reactivity	Human
Application	Direct Immunofluorescence Flow Cytometry Immunofluorescence

Background

CD14 is a GPI-anchored molecule expressed by virtually all human monocytes and macrophages and – to a lesser degree - granulocytes. CD14 together with Toll-like receptor 4 and MD-2 forms the LPS-receptor complex that recognizes and signals the presence of LPS. While CD14 has no signaling structure its main role seems to be the binding of LPS. The MEM18 antibody permits the identification and enumeration of leukocytes using flow cytometry. MEM18 has been also used for functional studies since this antibody blocks the interaction of LPS with CD14 on monocytes. Results must be interpreted 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

Product

2 ml of FITC-conjugated anti CD14 (clone MEM18) 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

The CD14 mAb (clone MEM18) recognizes surface CD14 on human monocytes and macrophages as well as on neutrophils. The sensitivity of MEM18 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, 50 µl of leukocytes containing 10⁷ cells/ml are stained with 20 µl 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 3-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

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.

References

1. Beutler, B. (2002) *Curr Top Microbiol Immunol* 270, 109-20. 2. Goyert, S. M. (1989) In *Leukocyte Typing IV* (Oxford University Press, Oxford-New York-Tokyo) p789-793 3. Goyert, S. M., Ferrero, E., Rettig, W. J., Yenamandra, A. K., Obata, F. & Le Beau, M. M. (1988) *Science* 239, 497-500. 4. Goyert, S. M., Ferrero, E. M., Seremetis, S. V., Winchester, R. J., Silver, J. & Mattison, A. C. (1986) *J Immunol* 137, 3909-14. 5. Juan, T. S., Hailman, E., Kelley, M. J., Busse, L. A., Davy, E., Empig, C. J., Narhi, L. O., Wright S. D. & Lichenstein, H. S. (1995) *J Biol Chem* 270, 5219-24. 6. Knapp, W. (1989) In *Leukocyte typing IV* (Oxford University Press, Oxford-New York-Tokyo) p747-780 7. Means, T. K., Lien, E., Yoshimura, A., Wang, S., Golenbock, D. T. & Fenton, M. J. (1999) *J Immunol* 163, 6748-55. 8. Zilberman, M., Goyert, S. M. & Vogel, S. N. (2001) *J Immunol* 166, 574-81. 9. Tapping, R. I., Akashi, S., Miyake, K., Godowski, P. J. & Tobias, P. S. (2000) *J Immunol* 165, 5780-7. 10. Ugolini, V., Nunez, G., Smith, R. G., Stastny, P. & Capra, J. D. (1980) *Proc Natl Acad Sci U S A* 77, 6764-8. 11. Yoshimura, A., Lien, E., Ingalls, R. R., Tuomanen, E., Dziarski, R. & Golenbock, D. (1999) *J Immunol* 163, 1-5.

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. Exalpha's sole liability is limited to either replacement of the products or refund of the purchase price. Exalpha is not liable for property damage, personal injury, or economic loss caused by the product.

Safety Datasheet(s) for this product:

NM_Sodium Azide

