

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The CD14 antigen is a glycosyl-phosphatidylinositol-linked single-chain surface membrane glycoprotein with a molecular weight of 53-55 kDa.

CD14 is found on cells of myelomonocytic lineage. It is strongly expressed on monocytes, macrophages, and weakly on neutrophils (1, 2). It is also present on pleural phagocytic cells and on reticular dendritic cells, on Langerhans cells, and histiocytes (3, 4). CD14 is not expressed on B lymphocytes, T lymphocytes, NK cells, red blood cells and platelets.

The CD14 molecule functions as a high affinity receptor for the complex of lipopolysaccharide (LPS) and the LPS-binding protein (LBP).

The RMO52 monoclonal antibody does not react with T or B lymphocytes (1, 2). It has been assigned to the CD14 cluster of differentiation during the 6th HLDA Workshop on Human Leucocyte Differentiation Antigens in Kobe, Japan, in 1996 (WS Code: MA62) (5).

REAGENT

IOTest CD14-APC-Alexa Fluor 750

Conjugated antibody

PN A86052 - 0.5 mL - Liquid - 10 µL/test*

Clone RMO52

Isotype IgG2a, Mouse

Immunogen Monocytes

Hybridoma SP2/0 x balb/c

Source Ascites fluid

Purification Affinity chromatography

Conjugation Allophycocyanin-Alexa Fluor 750 (APC-Alexa Fluor 750)

Molar Ratio APC-Alexa Fluor 750 / Ig : 0.5 - 1.5

Fluorescence Excites at 633/638 nm
Emits at 775 nm

REAGENT CONTENTS

This antibody is provided in phosphate-buffered saline, containing 0.1% sodium azide and 2 mg/mL bovine serum albumin.

STATEMENTS OF WARNING

1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.
2. Specimens, samples and all material coming in contact with them should be considered potentially infectious and disposed of with proper precautions.
3. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
4. Do not use antibody beyond the expiration date on the label.
5. Do not expose reagents to strong light during storage or incubation.
6. Avoid microbial contamination of reagents or incorrect results might occur.
7. Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze.

REAGENT PREPARATION

No reconstitution is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

PRECAUTIONS

Due to the tandem structure of the fluorochrome, APC-Alexa Fluor 750 also emits light at 660 nm. This secondary emission peak varies from lot-to-lot of APC-Alexa Fluor 750. Therefore, for multi-color analysis, the compensation matrix should be carefully checked when changing the lot of a APC-Alexa Fluor 750-conjugate.

SELECTED RESEARCH REFERENCES

1. Todd III, R.F., Nadler, L.M., Schlossman, S.F., "Antigens on human monocytes identified by monoclonal antibodies", 1981, J. Immunol., 4, 126, 1435-1442.

2. Todd, R.F., van Agthoven, A., Schlossmann, S.F., Terhorst, C., "Structural analysis of differentiation antigens Mo1 and Mo2 on human monocytes", 1982, Hybridoma, 3, 1, 329-337.
3. Peters, J.H., Ruppert, J., Gieseler, R.K.H., Najar, H.M., Xu, H., "Differentiation of human monocytes into CD14 negative accessory cells: do dendritic cells derive from the monocytic lineage?", 1991, Pathobiology, 59, 122-126.
4. Ziegler-Heitbrock, H.W.L., Ulevitch, R.J., "CD14: Cell surface receptor and differentiation markers", 1993, Immunol. Today, 3, 14, 121-125.
5. Goyert, S.M., Cohen, L., Gangloff, S.C., Ashmun, R., Haefner-Cavillon, N., "CD14 Workshop panel report", 1997, Leucocyte Typing VI, White Cell Differentiation Antigens. Kishimoto, T., et al, Eds., Garland Publishing, Inc., 963-965.

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(*): 10 µL is the quantity of product sufficient to stain
5 x 10⁵ cells in a standard immunofluorescence assay