

## Analyte Specific Reagent.

Analytical and performance characteristics are not established.

### SPECIFICITY

The CD38 antigen is a 45 kDa single-chain type II glycoprotein. It is an integral membrane protein with a long extracellular C-terminal domain, a single membrane-spanning region and a short N-terminal cytoplasmic tail (1, 2).

The CD38 antigen is expressed on a variety of hematopoietic cells, and its distribution depends on the state of the cell differentiation and the cell activation. In adults, the CD38 molecule is expressed on earlier stage of B lymphocyte ontogeny, lost during maturation and re-expressed upon terminal differentiation to plasma cells. This molecule is also strongly expressed on thymocytes, but is found at low density on resting T lymphocytes (1). It is expressed on the majority of resting NK cells and monocytes, and is also found on platelets (3), and red blood cells (4).

The LS198-4-3 monoclonal antibody was assigned to the CD38 cluster of differentiation at the 5th HLDA Workshop on Human Leukocyte Differentiation Antigens in Boston, USA, in 1993 (WS Code: T-CD38.06, Section T) (5).

### REAGENT

IOTest CD38-APC-Alexa Fluor 750  
Conjugated antibody  
PN A86049 - 0.5 mL - Liquid - 10 µL/test\*

<b>Clone</b>	LS198-4-3
<b>Isotype</b>	IgG1, Mouse
<b>Immunogen</b>	PB77
<b>Hybridoma</b>	SP2/0 x balb/c
<b>Source</b>	Ascites fluid
<b>Purification</b>	Affinity chromatography
<b>Conjugation</b>	Allophycocyanin-Alexa Fluor 750 (APC-Alexa Fluor 750)
<b>Molar Ratio</b>	APC-Alexa Fluor 750 / Ig : 0.5 - 1.5
<b>Fluorescence</b>	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. Mehta, K., Shahid, U., Malavasi, F., "Human CD38, a cell-surface protein with multiple functions", 1996, FASEB J., 10, 1408-1417.

2. Malavasi, F., Funaro, Roggero, Horenstein, A., Calosso, L., Mehta, K., "Human CD38: a glycoprotein in search of a function", 1994, Immunol. Today, 15, 95-97.
3. Ramaschi, G., Torti, M., Festetics, E.T., Sinigaglia, F., Malavasi, F., Balduini, C., "Expression of cyclic ADP-Ribose-synthetizing CD38 molecule on human platelet membrane", 1996, Blood, 87, 2308-2313.
4. Zocchi, E., Franco, L., Guida, L., Benatti, U., Bargellesi, A., Malavasi, F., Lee, H.C., DeFlora, A., "A single protein immunologically identified as CD38 display NAD<sup>+</sup> Glycohydrolase, ADP-Ribosyl Cyclase and cyclic ADP-Ribose Hydrolase activities at the outer surface erythrocytes", 1993, Biochem. Biophys. Res. Com., 196, 1459-1465.
5. Boumsell, L., "T-cell antigens: section report", 1995, Leucocyte Typing V, White Cell Differentiation Antigens, Schlossman, S.F., et al., Eds., Oxford Univ. Press, 241-279.

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### MANUFACTURED BY :

IMMUNOTECH SAS  
a Beckman Coulter Company  
130, avenue de Lattre de Tassigny  
B.P. 177 - 13276 Marseille Cedex 9  
France

For additional information in the USA, call 800-526-7694.

Outside the USA, contact your local Beckman Coulter representative.

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(\*): 10 µL is the quantity of product sufficient to stain 5 x 10<sup>5</sup> cells in a standard immunofluorescence assay