PN B20025 – 0.5 mL – Liquid – 10 µL/test – Clone MAB89

Analyte Specific Reagent.
Analytical and performance characteristics are not established.

SPECIFICITY
The CD40 antigen is a 44-48 kDa type I integral membrane protein of the tumor necrosis factor receptor (TNFR) superfamily (1, 2). This antigen is found on B cell lines, is strongly expressed by interdigitating cells (IDC), basal epithelial cells, and is also present on macrophages, some endothelial cells, and follicular dendritic cells. It is a pan-B marker, absent only from terminally differentiated plasma cells (2).
CD40 is implicated in the process of B cell selection in the germinal centre. Studies demonstrated that CD40 mononclonal antibodies (mAbs) induce strong homotypic adhesions in resting B cells and, together with interleukin-4 (IL-4) maintain the cell cycle of blasts of the B lineage. They also can promote the switch to IgE secretion (3).
Activated B cells via CD40 antigen in the presence of IL-10 differentiate into plasma cells and secrete large amounts of immunoglobulins (4). The CD154, (CD40 ligand) is a membrane glycoprotein on activated T cells that induces B cell proliferation and immunoglobulin secretion (5, 6). CD154 is also expressed on activated platelets and triggers an inflammatory reaction of endothelial cells (7).
The MAB89 mAb reacts specifically with CD40 (8).
The MAB89 mAb was assigned to the CD40 cluster of differentiation at the 6th International Workshop on Human Leucocyte Differentiation Antigens in Kobe, Japan, in 1996 (2).

REAGENT
IOTest CD40-PC5.5 Conjugated antibody PN B20025 - 0.5 mL - Liquid - 10 µL/test
Clone MAB89
Isotype IgG1, Mouse
Immunogen Anti-µ- activated tonsillar human B cells
Hybridoma NS1 x balb/c
Source Ascites fluid or supernatant of in vitro cultured hybridoma cells.

Purification Affinity chromatography
Conjugation R Phycocerythrin-Cyanine 5.5 (PC5.5)
Molar Ratio PC5.5/ Ig : 0.5 - 1.5
Fluorescence Excites at 488 nm Emits at 692 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 AND HANDLING CONDITIONS AND STABILITY
This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze. 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, PC5.5 also emits light at 575 nm. This secondary emission peak varies from lot-to-lot of PC5.5. Therefore, for multi-color analysis, the compensation matrix should be carefully checked when changing the lot of a PC5.5-conjugate.

SELECTED RESEARCH REFERENCES

TRADEMARKS
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