
**Biotinylated Monoclonal Antibody To Mouse Monocytes
And Macrophages
Marker With Broad Specificity**

Monoclonal antibody MOMA-2 is a useful marker for the broad detection of monocytes and macrophages in all mouse strains. In combination with the anti F4/80 marker BM8 (product T-2006) it allows a precise characterisation of tissue fixed macrophages in various organs. The antibody stains a mature macrophage subset, monocytes and a few precursors in bone marrow. Dendritic cells show low to intermediate expression. The staining shows close correlation with expression of acid phosphatase in tissue sections. MOMA-2 is predominantly expressed in the cytoplasm, but is also present on the cell surface.

This antibody was produced serum-free, without fetal calf serum.

Product number: T-2029

Clone: MOMA-2

Lot: 02PB1434

TECHNICAL AND ANALYTICAL CHARACTERISTICS:

Host species, subclass: Rat IgG2b

Quantity: 100µg

Format: Affinity purified from cell culture supernatant, biotinylated, lyophilized. Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.2mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 5mg/ml bovine serum albumin (BSA) as a stabilizer and 0.05% (v/v) Kathon CG as a preservative.

Stability: Original vial: 1 year at 4° - 8°C. Minimize repeated thawing and freezing of the stock solution.

Applications: Each lot of this antibody has been tested and validated for immunohistochemistry (IHC); the antibody has been described to work in FACS (after permeabilization).
Approximate working dilution for IHC:
Frozen sections: 0.125µg/ml (1:1600)
Paraffin sections: does not react on routinely processed paraffin sections.
Optimal dilutions should be determined by the end user.
Suggested positive control: mouse spleen.
Please see www.bma.ch for protocols and general information.

Immunogen: Mouse lymph node stroma.

Antigen, epitope: The antigen is a (glyco-)protein of 140kDa molecular weight which is located within the cytoplasm and on the cell surface. The epitope has not been further characterized.

Antigen distribution:

Isolated cells: In the cytospin preparation of thioglycollate stimulated peritoneal exudate cells MOMA-2 detects an antigen as distinct cytoplasmic spots. MOMA-2 detects monocytes of the peripheral blood and a subpopulation of bone marrow cells

Tissue sections MOMA-2 detects typical tissue macrophages as does the anti F4/80-specific clone BM8 (pan macrophage marker). However, different staining patterns are visible as shown below. The most predominant difference can be observed in T-cell areas and follicles of peripheral lymphoid organs where the anti F4/80 clone BM8 is negative.

Comparison of different mature macrophage markers

Product number	MOMA-2 T-2007	BM8 (anti F4/80) T-2006	ER-BMDM 1 T-2015
Monocytes	+	+	-
Kupffer cells	+	+	-
Langerhans cells	+/-	+	
Tingible body macrophages	+	-	
Interdigitating cells	+/-	-	+
Dendritic cells	+/-	-	+
Microglial cells	-		-
Marginal zone macrophages	-	-	
Marginal metallophilic cells	-	-	-
Pneumocytes type II			+
Alveolar lavage cells		66%	26%
Resident peritoneal cells (PCs)		51%	34%
Thioglycollate elicited PCs time after injection: 4hours		81%	79%
time after injection: 8 hours		28%	15%
Bone Marrow (BM) cells	14%	37%	5%
BM cells after 7 days with M-CSF	30%	96%	91%

Kraal et al. (1987) modified and P.J.M. Leenen personal communication

Specificity:

Mouse: monocytes and macrophages.

Other species: not tested.

Selected references

BREEL, M., MEBIUS, R.E., KRAAL,G.: Dendritic cells of the mouse recognized by two monoclonal antibodies. Eur. J. Immunol.: 17, 1555 - 1559 (1987).

KRAAL, G., REP, M., JANSE, M.: Macrophages in T and B Cell Compartments and Other Tissue Macrophages Recognized by Monoclonal Antibody MOMA-2; An Immunohistochemical Study. Scand. J. Immunol.: 26, 653 - 661 (1987).

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