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## **Monoclonal Antibody To Mouse Monocytes / 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.

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<b>Product Number:</b>	T-2007 (Lot17PO0503)
<b>Clone:</b>	MOMA-2
<b>Host species, isotype:</b>	Rat IgG2b
<b>Quantity:</b>	200µg
<b>Format:</b>	Affinity purified, lyophilized  Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.4mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 5mg/ml bovine serum albumin (BSA) as a stabilizer and 0.1% sodium azide as a preservative.
<b>Stability:</b>	Original vial: 1 year at 4° - 8°C  Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing.
<b>Applications:</b>	Tested for immunohistochemistry (IHC); has been described to work in FACS (after permeabilisation).  <b>Approximate working dilution for IHC:</b> Frozen sections: 0.5-1µg/ml (1:400 - 1:800) 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 <a href="http://www.bma.ch">www.bma.ch</a> for protocols and general information.
<b>Immunogen:</b>	Mouse lymph node stroma.
<b>Antigen, epitope:</b>	The antigen is a (glyco-)protein of 140kDa m.w. which is located within the cytoplasm and on the cell surface. The epitope has not been further characterized.

**Antigen distribution:**

**Isolated cells:** In the cytopsin 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).

For in vitro research only. Caution: this product contains sodium azide, a poisonous and hazardous substance.