



BMA BIOMEDICALS

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Monoclonal Antibody To Rat CD11b/c Macrophages / Microglial Cells (CR3)

Monoclonal antibody OX-42 recognises most macrophages (including resident peritoneal and activated macrophages), Kupffer cells, but only about 35% of alveolar macrophages. It also labels dendritic cells extensively, and granulocytes and cells with the morphology of microglia in the brain. OX-42 is probably the rat equivalent of the human CR3 complement receptor for iC3b. In combination with OX-41 it facilitates a more distinct phenotyping of resident macrophages.

Product Number:	T-3102 (Lot 13PO0607)
Clone:	OX-42
Host species, isotype:	Mouse IgG2a
Quantity:	1mg
Format:	Purified, liquid Supplied as 1ml solution. This stock solution contains 1mg/ml IgG, phosphate buffered saline pH 7.2 (PBS) and 0.09% sodium azide as a preservative.
Stability:	Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing
Applications:	Tested for immunohistochemistry (IHC); has been described to work in FACS. Approximate working dilution for IHC: Frozen sections: 5 -10µg/ml (1:100 - 1:200) Paraffin sections: does not react on routinely processed paraffin sections. Optimal dilutions should be determined by the end user. Suggested positive control: Rat spleen. Please see www.bma.ch for protocols and general information.
Immunogen:	Peritoneal macrophages.
Antigen, epitope:	CD11b/c. OX-42 recognises three major polypeptides of 160kDa, 103kDa and 95kDa and a minor 133kDa protein under non-reducing conditions. Under reducing conditions two major peptides of 163kDa and 100kDa and a minor 135kDa peptide are detected.
Antigen distribution:	Isolated cells: OX-42 shows a similar reaction pattern to OX-41 on various isolated cells but stains bronchial lavage cells to a lesser degree. OX-42 inhibits complement mediated rosettes.

Tissue sections: OX-42 is a most suitable marker for the identification of microglial cells and Kupffer cells. It also stains dendritic cells strongly. Only a subpopulation of alveolar macrophages is recognised.

Specificity:

Rat: granulocytes, macrophages, microglial cells.

Other species: not tested

Distribution of OX-41 and OX-42 antigens on different cell types

Tissue	OX-41	OX-42
Spleen red pulp	+	+
Follicular tingible body macrophages	+	few
Interdigitating cells of spleen and lymph node	few	+
Kupffer cells	few	+
Glial cells of the brain	+	+*
Langerhans cells of the skin	+	+

*Microglia only

Selected references

PERRY, H., Gordon, S.: Modulation of CD 4 Antigen on Macrophages and Microglia in Rat Brain. *J. Exp. Med.*: 166, 1138 - 1143 (1987).

ROBINSON, A.P., White, T.M., Mason, D.W.: Macrophage heterogeneity in the rat as delineated by two monoclonal antibodies MRC OX-41 and MRC OX-42, the latter recognizing complement receptor type 3. *Immunology*: 57, 239-247 (1986).

WHITHELAND, J.L. et al.: Immunohistochemical Detection of T-cell Subsets and Other Leukocytes in Paraffin-embedded Rat and Mouse Tissues with Monoclonal Antibodies. *J. Histochem. Cytochem.* 43: 313-320 (1995).

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