



Peninsula Laboratories, LLC

A Member of the Bachem Group

305 Old County Road, San Carlos, CA 94070

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Monoclonal Antibody To Rat Macrophages Marginal Zone Metallophils

Monoclonal antibody ED 3 is a characteristic marker for tissue fixed macrophage subpopulations, particularly of lymphoid organs (e.g. marginal zone metallophilic macrophages). No other cell types, including monocytes and granulocytes, are positive. Macrophages in autoimmune diseased but not in healthy tissues express the ED3 antigen. The recognised antigen appears to be a receptor for sialylated glycoconjugates

Product Number: T-3013

Clone: ED3

Host species, isotype: Mouse IgG2a

Quantity: 250µg

Format: Purified, liquid

Supplied as a 0.25ml solution This stock solution contains 1mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), no stabilizer 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: 2µg/ml (1:500)

Paraffin sections: not tested.

Optimal dilutions should be determined by the end user.

Suggested positive control: Rat spleen.

Immunogen: Rat spleen cells.

Antigen, epitope: ED 3 recognises a membrane protein which is associated with a receptor for glycoconjugates.

Antigen distribution: ED3 recognizes a membrane antigen on macrophages. Bone marrow-derived macrophages stimulated by T-cells are positive with ED 3.

Specificity: Rat: macrophages.

Other species: not tested



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Staining pattern of ED1, ED2 and ED3 (from Dijkstra et al., 1985, modified):

Antibody:	ED1	ED2	ED3
Staining pattern	Granular, patchy cytoplasmic	Diffuse, membrane	Diffuse, membrane
<u>Spleen</u>			
<u>White pulp</u>			
inner PALS	++	-	+ Weakly
outer PALS	++	+	+ Weakly
follicle	+/-	-	-
marg. metallophils	+/- Weakly	-	+++ Branched
marginal zone	+/- Weakly	-	+++ Branched
Red Pulp	+++	+++	+++ Weakly
<u>Lymph node</u>			
<u>Cortex</u>			
outer cortex	+/- Weakly	-	+++ Subsinusoidal
branched			
paracortical area	++	+	-
follicles	+/-	-	-
Medulla	+++	+ 10-20%	+++
Capsule	+	+	-
<u>Peyer's patches</u>			
Interfollicular area	+++	++	+ Small groups 3-4 cells
Dome	+	-	-
Follicle-	-	-	-
Villi	+++ Apex	++ Apex basis	-
<u>Lung</u>			
BALT	++	Periphery of BALT	-
Perivascular/peribronchial	+	+++	-
Alveolar	+++	-	-
<u>Thymus</u>			
Cortex	++	++ Branched	-
Medulla	++	-	-/+ Weakly
Corticomedullary area	+++	+++	-
Capsule	+++ Branched	+++ Branched	++ Branched
<u>Liver</u>	+++ Branched	+++ Branched	++ Branched
<u>Bone marrow</u>	+++ Monocytes/ macrophages	++ Macrophages	-

+++ = (Almost) all acid phosphatase-positive cells stained with the monoclonal antibody.

++ = A considerable number stained + = Few stained -/+ = Very few stained or none at all

Selected references

DIJKSTRA, C.D. et al.: The heterogeneity of mononuclear phagocytes in lymphoid organs: distinct macrophage subpopulations of the rat recognised by monoclonal antibodies ED 1, ED 2 and ED 3. *Immunology* **54**, 589 - 599 (1985).

BEELEN, R.H.J. et al.: Monoclonal Antibodies ED 1, ED 2, and ED 3 Against Rat Macrophages: Expression of Recognized Antigens in Different Stages of Differentiation. *Transplantation Proceedings* **XIX**, (3), 3166-3170 (1987).

DAMOISEAUX, J.G. et al.: Expression of the ED3 antigen on rat macrophages in relation to experimental autoimmune diseases. *Immunobiology* **184**: 311-20 (1992)



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LANDSTROM, . & Funa, K.: Apoptosis in rat prostatic adenocarcinoma is associated with rapid infiltration of cytotoxic T-cells and activated macrophages. *Int. J. Cancer* **71**: 451-5 (1997)

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