



BMA BIOMEDICALS

R-PE Labeled Monoclonal Antibody To Mouse Mid-Stage Macrophage Precursor Cells, Ly-6C

Marker For Late CFU-M, Monoblasts and Monocytes

Monoclonal antibody ER-MP20 is useful for the detection of macrophage precursor cells in mid-stage development (late CFU-M, monoblasts and monocytes). It is ideally suited for the detection of monocytes in bone marrow samples by FACS. ER-MP20 also identifies activated macrophages in inflammatory tissues where the simultaneous use of the murine pan-macrophage marker BM8 (anti F4/80, product T-2006) is recommended. ER-MP20 also detects a wide range of endothelial cells.

The red R-Phycoerythrin label is particularly useful to avoid the greenish autofluorescence of some cells in their resting state.

TECHNICAL AND ANALYTICAL CHARACTERISTICS

Product Number:	T-2030 (Lot 02PB1434)
Clone:	ER-MP20
Host species, isotype:	Rat IgG2a
Quantity:	100µg
Format:	Affinity purified, R-PE labeled, liquid. Supplied as 0.5ml solution. This stock solution contains 0.2mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 10mg/ml bovine serum albumin (BSA) as a stabilizer and 0.09% sodium azide as a preservative.
Stability:	Original vial: 6 months at 4° - 8°C from date of purchase.
Applications:	Has been described to work in FACS. Approximate working dilution: Optimal dilutions should be determined by the end user. Suggested positive control: Monocytes. Please see www.bma.ch for protocols and general information.
Immunogen:	Mouse macrophage cell lines
Protein database:	<u>mouse-Q9Z1Q4</u>
Antigen, epitope:	The antigen is a glutaraldehyde (0.05%) and paraformaldehyde (1%) resistant 14kD surface protein which is very similar to Ly-6C and may be analogous to human CD59. It is inducible by IFN-alpha, IFN-beta and IFN-gamma.

Antigen distribution:

Isolated cells: In bone marrow cells the antigen is found on monoblasts and late CFU-M cells as well as on monocytes. It is also found on granulocytes and a subpopulation of lymphocytes in the peripheral blood. Granulocytic cells show a dull, and monocytic cells a bright antigen surface expression. Lymphoid cells express the antigen only very weakly. Thus, in the bone marrow three useful FACS windows can be defined for cell sorting purposes.

Tissue sections: The antigen is found on macrophage precursor subpopulations in the bone marrow and haematopoietic islands of the lymphoid organs, and in the spleen. Endothelial cells of small vessels in various organs also stain positive with ER-MP 20. Activated macrophages in inflammatory tissues also express the ER-MP 20-related antigen.

Specificity:

Mouse: Macrophage precursor cells, endothelial cells.

Other species: does not react with porcine tissues.

Selected references

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DE BRUIJN, M.F.T.R., et al. Analysis of ER-MP12/20 bone marrow populations in *Listeria monocytogenes* infected mice: a flow cytometric alternative for differential counting. *J Immunol Meth.* In press. (1998).

CHAN J., et al. Macrophage lineage cells in inflammation: characterization by CSF-1 receptor (c-Fms), ER-MP58 and ER-MP20 (Ly-6C) expression. *Blood*, in press (1998).

McCORMACK J., et al. Macrophage Progenitors from Mouse Bone Marrow and Spleen differ in their Expression of the Ly-6C Differentiation Antigen. *J. Immunol.* 151(11), 6389-6398 (1993).

P.J.M. LEENEN et al.: Murine Macrophage Precursor Characterization II. Monoclonal Antibodies against Macrophage Precursor Antigens. *Eur. J. Immunol.* 20, 27-34 (1990).

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R.H.J. BEELEN et al.: Milky spots in the omentum play an important role in the origin and differentiation of peritoneal macrophages. *Abst. Vth annual conference of the Upper Rhine Universities on the Macrophage*, Sept. 4/5th (1991).

P.J.M. LEENEN et al.: Differential Inhibition of Macrophage Proliferation by Anti-Transferrin Receptor antibody ER-MP 21: Correlation to Macrophage Differentiation Stage. *Exp. Cell Res.* 189, 55-63 (1990).

For in vitro research only. This product contains sodium azide as a preservative.