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Monoclonal Antibody to Ly6c - PE

Alternate names: Ly-6C2, Ly6C2, Lymphocyte antigen 6C2, Mouse Macrophage Marker

Catalog No.: BM4019R

Quantity: 0.1 mg

Concentration: 0.2 mg/ml

Background: The antigen detected by ER-MP20 is a glutaraldehyde (0.05%) and paraformaldehyde (1%) resistant 14 kD surface protein which is very similar to Ly-6C and may be analagous to human CD59. It is inducible by IFN-alpha, IFN-beta and IFN-gamma.Ly-6C is a member of the Ly-6 multigene family of type V glycophosphatidylinositol-anchored cell surface proteins. It is expressed on bone marrow cells, monocytes/macrophages, neutrophils, endothelial cells, and T-cell subsets. Mice with the Ly-6.2 allotype (e.g., AKR, C57BL, C57BR, C57L, DBA/2, PL, SJL, SWR, 129) have subsets of CD4+Ly-6C+ and CD8+Ly-6C+ cells, while Ly-6.1 strains (e.g., A, BALB/c, CBA, C3H/He, DBA/1, NZB) have only CD8+Ly-6C+ lymphocytes. Ly-6C may play a role in the development and maturation of lymphocytes.

Uniprot ID: P09568

NCBI: NP_001092687.1

GeneID: 100041546

Host / Isotype: Rat / IgG2a

Clone: ER-MP20

Immunogen: Mouse macrophage cell lines
Remarks: 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.

Format: **State:** Liquid purified Ig fraction
Purification: Affinity Chromatography
Buffer System: PBS, pH 7.2 containing 10 mg/ml BSA as a stabilizer and 0.09% Sodium Azide as a presevative
Label: PE – R-Phycoerythrin

Applications: Flow Cytometry.
Suggested Positive Control: Monocytes.
Has been described to work in Immunohistology.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This Monoclonl antibody ER-MP20 is useful for the detection of macrophage precursor cells in the mid-stage development stage (late CFU-M, monoblasts and monocytes). It is ideally suitable 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 antibody BM4007) 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.
Antigen Distribution on 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.
Antigen Distribution on Tissue Sections: The antigen is found on macrophage precursor subpopulations in the bone marrow and hemopoietic islands of the lymphoid organs, and in the spleen. Endothelial cells of small vessels in various organs also stain positive with ER-MP20. Activated macrophages in inflammatory tissues also express the ER-MP20-related antigen.

Species Reactivity: **Tested:** Mouse (Macrophage precursor cells, endothelial cells).

Storage: Store the antibody undiluted at 2-8°C.
Shelf life: 6 months from despatch.

General References:

1. DE BRUIJN M.F.T.R., et al.: Distinct mouse bone marrow macrophage precursors identified by differential expression on the ER-MP12 and ER-MP20 antigens. Eur.J. Immunol. 24, 2279-2284 (1994).
2. 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. (1998).
3. 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 (1998).
4. 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).
5. P.J.M. LEENEN et al.: Murine Macrophage Precursor Characterization II. Monoclonal Antibodies against Macrophage Precursor Antigens. Eur. J. Immunol. 20, 27-34 (1990).
6. P.J.M. LEENEN et al.: Murine Macrophage Precursor Characterization I. Production, phenotype and differentiation of macrophages precursor hybrids J. Immunol. 20, 15-25 (1990).
7. 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).
8. P.J.M. LEENEN et al.: Differential Inhibition of Macrophage Proliferation by Anti-Transferin Receptor antibody ER-MP 21: Correlation to Macrophage Differentiation Stage. Exp. Cell Res. 189, 55-63 (1990).