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Monoclonal Antibody to CD68 - FITC

Alternate names: Gp110, Macrophage marker, Macrosialin

Catalog No.: BM4000F

Quantity: 0.1 mg

Concentration: 0.1 mg/ml

Background: The CD68 antigen is a 37kD transmembrane protein that is post-translationally glycosylated to give a protein of 87-115kD. CD68 is specifically expressed by tissue macrophages, Langerhans cells and at low levels by dendritic cells. It could play a role in phagocytic activities of tissue macrophages, both in intracellular lysosomal metabolism and extracellular cell-cell and cell-pathogen interactions. It binds to tissue- and organ-specific lectins or selectins, allowing homing of macrophage subsets to particular sites. Rapid recirculation of CD68 from endosomes and lysosomes to the plasma membrane may allow macrophages to crawl over selectin bearing substrates or other cells.

Uniprot ID: Q4FZY1

NCBI: NP_001026808.1

GeneID: 287435

Host / Isotype: Mouse / IgG1

Clone: ED1

Immunogen: Rat Spleen cells. Spleen cells from immunised BALB/c mice were fused with cells of the SP2/0-Ag 14 mouse myeloma cell line.

Format:
State: Liquid purified IgG fraction.
Purification: Affinity Chromatography on Protein A.
Buffer System: PBS containing 0.09% Sodium Azide as preservative and 1% BSA as stabilizer.
Label: FITC – Fluorescein Isothiocyanate Isomer 1

Applications:
Flow Cytometry: Use 10 µl of neat antibody to labenl 10e6 cells in 100 µl. Results may be enhanced using membrane permeabilisation.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:
This antibody recognises CD68.
Species: Rat.
Other species not tested.

Storage:
Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
This product is photosensitive and should be protected from light.
Shelf life: one year from despatch.

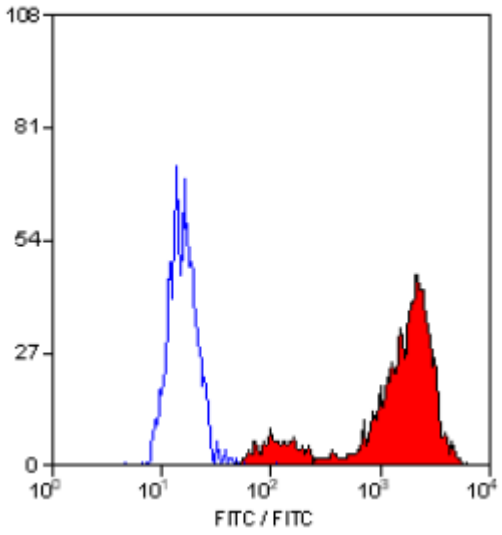
Caution:

Unconjugated antibody is cited in:
1. R. Schneider, M. Meusel, S. Renker, C. Bauer, H. Holzinger, M. Roeder, C. Wanner, M. Gekle, and C. Sauvant Low-dose indomethacin after ischemic acute kidney injury prevents downregulation of Oat1/3 and improves renal outcome. Am J Physiol Renal Physiol, Dec 2009; 297: F1614-F1621.

General References:

1. Damoiseaux, J.G. et al. (1994) Rat macrophage lysosomal membrane antigen recognised by monoclonal antibody ED1. Immunol. 83: 140-147.
2. Dijkstra, C.D. et al. (1985) The heterogeneity of mononuclear phagocytes in lymphoid organs: distinct macrophage subpopulations in the rat recognised by monoclonal antibodies ED1, ED2 and ED3. Immunol 54: 589-599.
3. Bauer, J. et al. (1994) Phagocytic activity of macrophages and microglial cells during the course of Acute and Chronic Relapsing Experimental Autoimmune Encephalomyelitis. J. Neurosci. Res. 38: 365-375.
4. Bao, F. et al. (2004) Early anti-inflammatory treatment reduces lipid peroxidation and protein nitration after spinal cord injury in rats. J, Neuro-chem. 88:1335-1344.
5. Zilka, N. et al. (2009) Human misfolded truncated tau protein promotes activation of microglia and leukocyte infiltration in the transgenic rat model of tauopathy. J. Neuroimmunol. 209: 16-25.
6. Fujita, E. et al. (2010) Statin Attenuates Experimental Anti-Glomerular Basement Membrane Glomerulonephritis Together with the Augmentation of Alternatively Activated Macrophages. Am J Pathol. Aug 9. [Epub ahead of print]
7. Salegio, E.A. et al. (2011) Macrophage presence is essential for the regeneration of ascending afferent fibres following a conditioning sciatic nerve lesion in adult rats. B.M.C. Neurosci. 12:11. [Epub].
8. McClain, J.A. et al. (2011) Adolescent binge alcohol exposure induces long-lasting partial activation of microglia. Brain Behav Immun. Jan 22. [Epub ahead of print]
9. Naito, Y. et al. (2011) Dietary iron restriction prevents hypertensive cardiovascular remodeling in dahl salt-sensitive rats. Hypertension. 57: 497-504.
10. Baker, S.C. et al. (2011) Cellular Integration and Vascularisation Promoted by a Resorbable, Particulate-Leached, Cross-Linked Poly(e-caprolactone) Scaffold. Macromol Biosci. doi: 10.1002/mabi.201000415.
11. Bedi, A. et al. (2010) Effect of early and delayed mechanical loading on tendon-to-bone healing after anterior cruciate ligament reconstruction. J Bone Joint Surg Am. 92: 2387-401.

Pictures:



Staining of rat peritoneal macrophages cells with Mouse Permeabilised Anti Rat CD68 antibody FITC conjugated (BM4000F).