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Monoclonal Antibody to MRP8/14 (S100A8/A9) - FITC

Alternate names: CAGA, CAGB, CFAG, CFAG, Calgranulin A/B, Calprotectin, L1 Protein, MRP-14, MRP-8, P14, P8

Catalog No.: SM2011F

Quantity: 0.1 mg

Concentration: 0.1 mg/ml

Background: Macrophages comprise of many forms of mononuclear phagocytes found in tissues. Mononuclear phagocytes arise from hematopoietic stem cells in the bone marrow. After passing through the monoblast and promonocyte states of the monocyte stage, they enter the blood, where they circulate for about 40 hours. They then enter tissues and increase in size, phagocytic activity, and lysosomal enzyme content becomming macrophages. Among the functions of macrophages are nonspecific phagocytosis and pinocytosis, specific phagocytosis of opsonized microorganisms mediated by Fc receptors and complement receptors, killing of ingested microorganisms, digestion and presentation of antigens to T and B lymphocytes, and secretion of a large number of diverse products, including many enzymes including lysozyme and collagenases, several complement components and coagulation factors, some prostaglandins and leukotrienes, and many regulatory molecules (Interferon, Interleukin 1). Among cells that are now recognised as macrophages are histiocytes, Kupffer cells, osteoclasts, microglial cells, synovial type A cells, interdigitating cells, and Langerhans cells (in normal tissues) and epithelioid cells and Langerhans-type and foreign-body-type multinucleated giant cells (in inflamed tissues).

Host / Isotype: Mouse / IgG1

Clone: MAC387

Immunogen: Human Monocytes.
Spleen cells from immunised BALB/c mice were fused with cells of the mouse NS1 myeloma cell line.

Format: **State:** Liquid purified IgG fraction.
Purification: Affinity Chromatography on Protein G.
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 label 10e6 cells in 100 µl. (Membrane permeabilization is required).
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

This antibody recognises the L1 or Calprotectin molecule, an intracytoplasmic antigen comprised of a 12kD alpha chain and a 14kD beta chain.
The antigen recognized by this anti Macrophages antibody is expressed by granulocytes, monocytes and by tissue macrophages. Variable results have been reported for staining brain macrophages and microglia.
Species: Human, Horse, Cynomolgus Monkey, Rhesus Monkey, Bovine, Baboon, Rabbit, Canine (Dog), Cat, Pig and Rat.
Other species not tested.

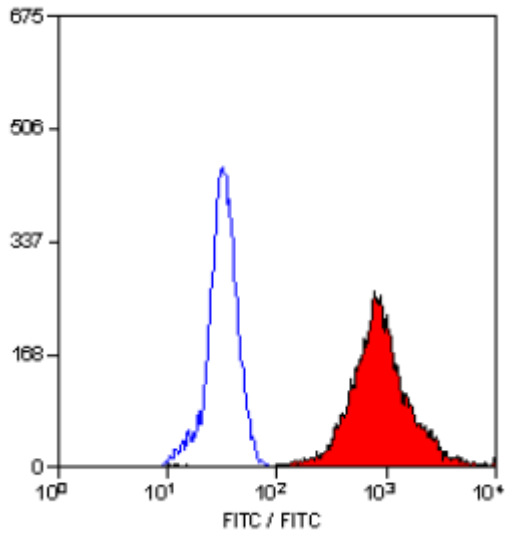
Storage:

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

General References:

1. Brandtzaeg, P. et al. (1988) MAC387 antibody and detection of formalin resistant myelomonocytic L1 antigen. J. Clin. Path. 41: 963-970.
2. Brandtzaeg, P. et al. (1992) The leucocyte protein L1 (calprotectin): usefulness as an immunohistochemical marker antigen and putative biological function. Histopathology. 21: 191-196.
3. Flavell, D.J. et al. (1987) Identification of tissue histiocytes on paraffin sections by a new monoclonal antibody. J. Histochem. Cytochem. 35: 1217-1226.
4. Gutierrez, M. et al. (1999) The detection of CD2+, CD4+, CD8+ and WC1+, T lymphocytes, B cells and macrophages in fixed and paraffin embedded bovine tissue using range of antigen recovery and signal amplification techniques. Vet. Immunol. Immunopathol. 71: 321-334.
5. Ramsay, A. D. et al. (1991) Phenotypic analysis of malignant lymphoma in simian immunodeficiency virus infection using anti-human antibodies. J. Pathol. 164: 321-328.
6. Christgau, M. et al. (1998) Characterization of Immunocompetent cells in the diseased canine periodontium. J. Histochem. Cytochem. 46: 1443 - 1454.
7. Perez, J. et al. (1999) Immunohistochemical study of the inflammatory infiltrate assocated with equine squamous cell carcinoma. J. Comp. Path. 121: 385-397.
8. Obert, L. et al. (2002) Early pathogenesis of transmucosal Feline Immunodeficiency Virus infection. J. Virol. 76: 6311-6322.
9. Malik, N. et al. (1998) Apoptosis and Cell proliferation after porcine coronary angioplasty. Circulation. 98: 1657 - 1665.
10. Bagavant, H. et al. (2002) Induction and immunohistology of autoimmune ovarian disease in cynomolgus macaques (Macaca fascicularis). Am. J. Pathol. 160: 141-149.

Pictures:



SM2011F Human Macrophages antibody -FITC
Staining of Human peripheral blood granulocytes.