

# Macrophage Marker (3F12): sc-53895

## BACKGROUND

Blood consists of a solid component that includes erythrocytes, leukocytes and platelets, and a liquid component known as plasma, which is a buffered solution of proteins and salts. Innate and adaptive immune responses rely on the function of leukocytes, which are nucleated white blood cells that destroy invading cells and remove debris. White blood cells, also designated polymorphonuclear leukocytes, include granulocytes, monocytes and mast cell precursors. Macrophages are tissue localized, differentiated cells derived from circulating monocytes. Along with circulating neutrophils, macrophages are phagocytic cells that engulf antibody-coated pathogens, which are subsequently degraded in intracellular vesicles. Tissue localized macrophages can target a spectrum of bacterial pathogens without requiring previous exposure.

## REFERENCES

- Denburg, J.A., Telizyn, S., Messner, H., Lim, B., Jamal, N., Ackerman, S.J., Gleich, G.J. and Bienenstock, J. 1985. Heterogeneity of human peripheral blood eosinophil-type colonies: evidence for a common basophil-eosinophil progenitor. *Blood* 66: 312-318.
- Scordamaglia, A., Orlandini, A., Zucchi, L., Caria, M., Zocchi, E., Bisetti, A. and Canonica, G.W. 1987. The immunological events leading to the *in vitro* response to PPD. *Allergol. Immunopathol.* 15: 83-87.
- Margolick, J.B., Volkman, D.J., Goldstein, H. and Fauci, A.S. 1988. Production of phagocytosis-inducing factor and expression of 4B4 antigen by cloned human T cells before and after transformation with HTLV-I. *Cell. Immunol.* 111: 196-203.
- Mast, J., Goddeeris, B.M., Peeters, K., Vandesande, F. and Berghman, L.R. 1998. Characterization of chicken monocytes, macrophages and interdigitating cells by the monoclonal antibody KUL01. *Vet. Immunol. Immunopathol.* 61: 343-357.
- Wigley, P., Berchieri, A., Page, K.L., Smith, A.L. and Barrow, P.A. 2001. *Salmonella enterica* serovar Pullorum persists in splenic macrophages and in the reproductive tract during persistent, disease-free carriage in chickens. *Infect. Immun.* 69: 7873-7879.
- Gordon, S. and Taylor, P.R. 2005. Monocyte and macrophage heterogeneity. *Nat. Rev. Immunol.* 5: 953-964.
- Hume, D.A. 2006. The mononuclear phagocyte system. *Curr. Opin. Immunol.* 18: 49-53.
- Roodman, G.D. 2006. Regulation of osteoclast differentiation. *Ann. N.Y. Acad. Sci.* 1068: 100-109.

## SOURCE

Macrophage Marker (3F12) is a mouse monoclonal antibody raised against thymic stroma of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Macrophage Marker (3F12) is recommended for detection of macrophages of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **Macrophage Marker (MAC387): sc-66204** for Macrophage Marker antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.