

Macrophage Marker (RM0029-11H3): sc-101447

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., et al. 1985. Heterogeneity of human peripheral blood eosinophil-type colonies: evidence for a common basophil-eosinophil progenitor. *Blood* 66: 312-318.
- Scordamaglia, A., et al. 1987. The immunological events leading to the *in vitro* response to PPD. *Allergol. Immunopathol.* 15: 83-87.
- Margolick, J.B., et al. 1988. Production of phagocytosis-inducing factor and expression of 4B4 antigen by cloned human T cells before and after transformation with HTLV-1. *Cell. Immunol.* 111: 196-203.
- Mast, J., et al. 1998. Characterization of chicken monocytes, macrophages and interdigitating cells by the monoclonal antibody KUL01. *Vet. Immunol. Immunopathol.* 61: 343-357.
- Wigley, P., et al. 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.

SOURCE

Macrophage Marker (RM0029-11H3) is a rat monoclonal antibody raised against isolated macrophages of mouse origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 for detailed protocols and support products.

APPLICATIONS

Macrophage Marker (RM0029-11H3) is recommended for detection of macrophages of mouse origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

SELECT PRODUCT CITATIONS

- Foryst-Ludwig, A., et al. 2010. PPAR γ activation attenuates T-lymphocyte-dependent inflammation of adipose tissue and development of Insulin resistance in obese mice. *Cardiovasc. Diabetol.* 9: 64.
- Liu, S., et al. 2012. Autophagy plays a critical role in kidney tubule maintenance, aging and ischemia-reperfusion injury. *Autophagy* 8: 826-837.
- Bei, Y., et al. 2013. Long-term treatment with fasudil improves bleomycin-induced pulmonary fibrosis and pulmonary hypertension via inhibition of Smad2/3 phosphorylation. *Pulm. Pharmacol. Ther.* 26: 635-643.
- Zhou, S., et al. 2013. Aging does not enhance experimental cigarette smoke-induced COPD in the mouse. *PLoS ONE* 8: e71410.
- Zhang, R., et al. 2013. C-reactive protein/oxidised low-density lipoprotein/ β 2-glycoprotein I complex promotes atherosclerosis in diabetic BALB/c mice via p38mitogen-activated protein kinase signal pathway. *Lipids Health Dis.* 12: 42.
- Kuhn, E., et al. 2014. Paradoxical resistance to high-fat diet-induced obesity and altered macrophage polarization in mineralocorticoid receptor-overexpressing mice. *Am. J. Physiol. Endocrinol. Metab.* 306: E75-E90.
- Simões Sato, A.Y., et al. 2014. BMP-2 and -4 produced by vascular smooth muscle cells from atherosclerotic lesions induce monocyte chemotaxis through direct BMPRII activation. *Atherosclerosis* 235: 45-55.
- Niu, M., et al. 2014. Biodistribution and *in vivo* activities of tumor-associated macrophage-targeting nanoparticles incorporated with doxorubicin. *Mol. Pharm.* 11: 4425-4436.
- Gazivova, I., et al. 2016. The MET receptor tyrosine kinase confers repair of murine pancreatic acinar cells following acute and chronic injury. *PLoS ONE* 11: e0165485.
- Bei, Y., et al. 2016. RhoA/Rho-kinase activation promotes lung fibrosis in an animal model of systemic sclerosis. *Exp. Lung Res.* 42: 44-55.
- Niu, M., et al. 2016. Tumor-associated macrophage-mediated targeted therapy of triple-negative breast cancer. *Mol. Pharm.* 13: 1833-1842.
- Rossi, E.L., et al. 2018. Resveratrol inhibits obesity-associated adipose tissue dysfunction and tumor growth in a mouse model of postmenopausal claudin-low breast cancer. *Mol. Carcinog.* 57: 393-407.



See **Macrophage Marker (MAC387): sc-66204** for Macrophage Marker antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.