SANTA CRUZ BIOTECHNOLOGY, INC.

CD68 (PG-M1): sc-59104

BACKGROUND

CD68, which is homologous to the mouse antigen macrosialin, belongs to a family of acidic, highly glycosylated lysosomal glycoproteins (LGPs) that includes LAMP-1 and LAMP-2. CD68 is found in cytoplasmic granules and in the cytoplasm of various non-hematopoietic tissues including liver and kidney tubules and glomeruli. CD68 is also found, to a lesser extent, on the surface of macrophages, monocytes, neutrophils, basophils and large lymphocytes. LGPs are major components of lysosomal membranes and may act to protect the membranes from attack by hydrolases.

REFERENCES

1. Pulford, K.A., Sipos, A., Cordell, J.L., Stross, W.P. and Mason, D.Y. 1990. Distribution of the CD68 macrophage/myeloid associated antigen. Int. Immunol. 2: 973-980.
2. Fukuda, M. 1991. Lysosomal membrane glycoproteins. Structure, biosynthesis and intracellular trafficking. J. Biol. Chem. 266: 21327-21330.
3. Holness, C.L. and Simmons, D.L. 1993. Molecular cloning of CD68, a human macrophage marker related to lysosomal glycoproteins. Blood 81: 1607-1613.
4. Ramprasad, M.P., Fischer, W., Witztum, J.L., Sambrano, G.R., Quehenberger, O. and Steinberg, D. 1995. The 94 to 97 kDa mouse macrophage membrane protein that recognizes oxidized low density lipoprotein and phosphatidylserine-rich liposomes is identical to macrosialin, the mouse homologue of human CD68. Proc. Natl. Acad. Sci. USA 92: 9580-9584.
5. Strobl, H., Scheinecker, C., Csmarits, B., Majdic, O. and Knapp, W. 1995. Flow cytometric analysis of intracellular CD68 molecule expression in normal and malignant haemopoiesis. Brit. J. Haematol. 90: 774-782.
6. Ramprasad, M.P., Terpstra, V., Kondratenko, N., Quehenberger, O. and Steinberg, D. 1996. Cell surface expression of mouse macrosialin and human CD68 and their role as macrophage receptors for oxidized low density lipoprotein. Proc. Natl. Acad. Sci. USA 93: 14833-14838.

CHROMOSOMAL LOCATION

Genetic locus: CD68 (human) mapping to 17p13.1.

SOURCE

CD68 (PG-M1) is a mouse monoclonal antibody raised against Gaucher cells of human origin.

PRODUCT

Each vial contains 250 µl culture supernatant containing IgG_3 with < 0.1% sodium azide.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

APPLICATIONS

CD68 (PG-M1) is recommended for detection of CD68 of human origin by immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

Suitable for use as control antibody for CD68 siRNA (h): sc-35019, CD68 shRNA Plasmid (h): sc-35019-SH and CD68 shRNA (h) Lentiviral Particles: sc-35019-V.

Molecular Weight of CD68: 75-110 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 2) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

SELECT PRODUCT CITATIONS

1. Pérez-Pérez, R., Ortega-Delgado, F.J., García-Santos, E., López, J.A., Camafeita, E., Ricart, W., Fernández-Real, J.M. and Peral, B. 2009. Differential proteomics of omental and subcutaneous adipose tissue reflects their unalike biochemical and metabolic properties. J. Proteome Res. E-published.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.