

CD68 (SPM130): sc-52998

BACKGROUND

CD68, which is homologous to the mouse antigen macrosialin, belongs to a family of acidic, highly glycosylated lysosomal glycoproteins (LGP) 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., et al. 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., et al. 1993. Molecular cloning of CD68, a human macrophage marker related to lysosomal glycoproteins. *Blood* 81: 1607-1613.

CHROMOSOMAL LOCATION

Genetic locus: CD68 (human) mapping to 17p13.1, Cd68 (mouse) mapping to 11 B3.

SOURCE

CD68 (SPM130) is a mouse monoclonal antibody raised against subcellular fraction of human alveolar macrophages.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD68 (SPM130) is recommended for detection of CD68 of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) 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 siRNA (m): sc-35020, CD68 shRNA Plasmid (h): sc-35019-SH, CD68 shRNA Plasmid (m): sc-35020-SH, CD68 shRNA (h) Lentiviral Particles: sc-35019-V and CD68 shRNA (m) Lentiviral Particles: sc-35020-V.

Molecular Weight of CD68 highly glycosylated protein: 75-110 kDa.

Positive Controls: AML-193 whole cell lysate: sc-3641828, K-562 whole cell lysate: sc-2203 or U-937 cell lysate: sc-2239.

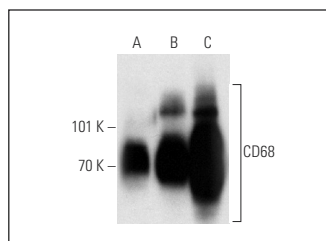
STORAGE

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

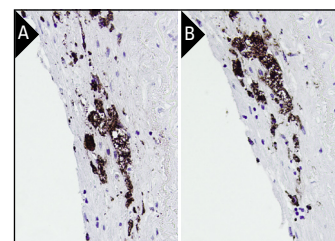
RESEARCH USE

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

DATA



CD68 (SPM130): sc-52998. Western blot analysis of CD68 expression in K-562 (A), U-937 (B) and AML-193 (C) whole cell lysates.



CD68 (SPM130): sc-52998. Immunoperoxidase staining of formalin-fixed paraffin embedded human coronary artery tissue showing macrophage staining adjacent to the lumina (A,B). Kindly provided by Dr. John Sanders, University of Virginia.

SELECT PRODUCT CITATIONS

1. Sáenz-Morales, D., et al. 2010. Differential resolution of inflammation and recovery after renal ischemia-reperfusion injury in Brown Norway compared with Sprague Dawley rats. *Kidney Int.* 77: 781-793.
2. Tommila, M., et al. 2010. Hemoglobin expression in rat experimental granulation tissue. *J. Mol. Cell Biol.* 3: 190-196.
3. Shaghghi, H., et al. 2014. Metabolic spectroscopy of inflammation in a bleomycin-induced lung injury model using hyperpolarized 1-(13) C pyruvate. *NMR Biomed.* 27: 939-947.
4. Baek, J.H., et al. 2015. IL-34 mediates acute kidney injury and worsens subsequent chronic kidney disease. *J. Clin. Invest.* 125: 3198-3214.
5. Cassanta, L.T.C., et al. 2017. Modulation of matrix metalloproteinase 14, tissue inhibitor of metalloproteinase 3, tissue inhibitor of metalloproteinase 4, and inducible Nitric oxide synthase in the development of periapical lesions. *J. Endod.* 43: 1122-1129.
6. Dai, Q., et al. 2021. Berberine impairs coxsackievirus B3-induced myocarditis through the inhibition of virus replication and host proinflammatory response. *J. Med. Virol.* 93: 3581-3589.
7. Tang, B., et al. 2022. Scorpion and centipede alleviates severe asthma through M2 macrophage-derived exosomal miR-30b-5p. *Aging* 14: 3921-3940.
8. Wang, X., et al. 2022. tRNA derived fragment tsRNA-14783 promotes M2 polarization of macrophages in keloid. *Biochem. Biophys. Res. Commun.* 636: 119-127.

CONJUGATES

See **CD68 (KP1): sc-20060** for additional antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.