SANTA CRUZ BIOTECHNOLOGY, INC.

CD68 (KP1): sc-20060

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

CD68 (KP1) is a mouse monoclonal antibody raised against a subcellular fraction of human alveolar macrophages.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD68 (KP1) is available conjugated to agarose (sc-20060 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-20060 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-20060 PE), fluorescein (sc-20060 FITC), Alexa Fluor® 488 (sc-20060 AF488), Alexa Fluor® 546 (sc-20060 AF546), Alexa Fluor® 594 (sc-20060 AF594) or Alexa Fluor® 647 (sc-20060 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-20060 AF680) or Alexa Fluor® 790 (sc-20060 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, CD68 (KP1) is available conjugated to either Alexa Fluor® 405 (sc-20060 AF405, 200 µg/ml) or PerCP (sc-20060 PerCP), 100 tests in 2 ml, for IF, IHC(P) and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

CD68 (KP1) is recommended for detection of CD68 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 10^6 cells).

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.

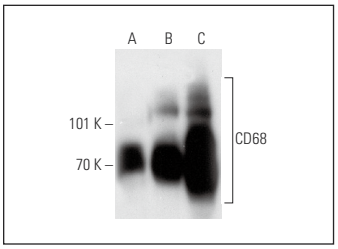
Molecular Weight of CD68 highly glycosylated protein: 75-110 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182, U-937 cell lysate: sc-2239 or K-562 whole cell lysate: sc-2203.

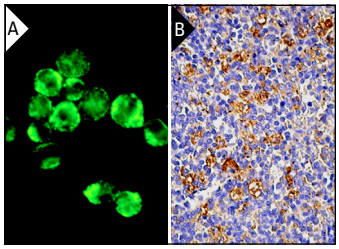
STORAGE

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

DATA



CD68 (KP1): sc-20060. Western blot analysis of CD68 expression in K-562 (**A**), U-937 (**B**) and AML-193 (**C**) whole cell lysates.



CD68 (KP1): sc-20060. Immunofluorescence staining of methanol-fixed THP-1 cells showing cytoplasmic and membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of subset of cells in red pulp (**B**).

SELECT PRODUCT CITATIONS

1. Kupreishvili, K., et al. 2008. Increased infiltration of *Chlamydophila pneumoniae* in the vessel wall of human veins after perfusion. Eur. J. Clin. Invest. 38: 462-468.
2. Lv, J., et al. 2017. Amygdalin ameliorates the progression of atherosclerosis in LDL receptor-deficient mice. Mol. Med. Rep. 16: 8171-8179.
3. Wu, Q., et al. 2018. The chemokine receptor CCR10 promotes inflammation-driven hepatocarcinogenesis via PI3K/Akt pathway activation. Cell Death Dis. 9: 232.
4. Zilberman-Itskovich, S., et al. 2019. Human mesenchymal stromal cells ameliorate complement induced inflammatory cascade and improve renal functions in a rat model of ischemia-reperfusion induced acute kidney injury. PLoS ONE 14: e0222354.
5. Danielsson, O., et al. 2020. Apoptosis in idiopathic inflammatory myopathies with partial invasion; a role for $CD8^+$ cytotoxic T cells? PLoS ONE 15: e0239176.
6. Alsheikh, H.A.M., et al. 2021. Normalizing glucose levels reconfigures the mammary tumor immune and metabolic microenvironment and decreases metastatic seeding. Cancer Lett. 517: 24-34.
7. Alfaro-Arnedo, E., et al. 2022. IGF1R acts as a cancer-promoting factor in the tumor microenvironment facilitating lung metastasis implantation and progression. Oncogene 41: 3625-3639.
8. Esobi, I.C., et al. 2023. miR-33a expression attenuates ABCA1-dependent cholesterol efflux and promotes macrophage-like cell transdifferentiation in cultured vascular smooth muscle cells. J. Lipids 2023: 8241899.

RESEARCH USE

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