

CD68 (B-7): sc-514937

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., 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. 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., et al. 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., et al. 1995. Flow cytometric analysis of intracellular CD68 molecule expression in normal and malignant haemopoiesis. *Br. J. Haematol.* 90: 774-782.
6. Ramprasad, M.P., et al. 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 (B-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 332-354 at the C-terminus of CD68 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514937 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

CD68 (B-7) is recommended for detection of CD68 of human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

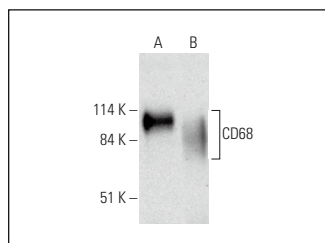
Molecular Weight of highly glycosylated CD68: 75-110 kDa.

Positive Controls: human spleen extract: sc-363779 or human PBL tissue extract.

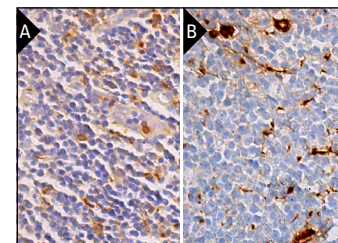
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



CD68 (B-7): sc-514937. Western blot analysis of CD68 expression in human spleen (A) and human PBL (B) tissue extracts.



CD68 (B-7): sc-514937. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of subset of cells in non-germinal center (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic staining of subset of cells in germinal center and subset of cells in non-germinal center (B).

RESEARCH USE

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



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