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SM1550PS Monoclonal Antibody to CD68 - Purified

Alternate names:	Gp110, Macrophage marker, Macrosialin
Quantity:	0.1 mg
Concentration:	1.0 mg/ml
Background:	CD68 is considered a pan macrophage marker, predominantly expressed on the intracellular lysosomes of tissue macrophages/monocytes, including Kupffer cells, microglia, histiocytes and osteoclasts, and is expressed to a lesser extent by dendritic cells and peripheral blood granulocytes. CD68 is expressed by many tumor types including some B cell lymphomas, blastic NK lymphomas, melanomas, granulocytic (myeloid) sarcomas, hairy cell leukemias, and renal, urinary and pancreatic tumors, and can be used in cancer studies to demonstrate the presence/localization of macrophages.
Uniprot ID:	P31996
NCBI:	NP_033983.1
GeneID:	12514
Host / Isotype:	Rat / IgG2a
Recommended Isotype Controls:	SM15P, SM15PX
Clone:	FA-11
Immunogen:	Purified Concanavalin A acceptor glycoprotein from P815 cell line.
Format:	**State:** Liquid purfied IgG fraction from Tissue Culture Supernatant **Purification:** Affinity Chromatography on Protein G **Buffer System:** PBS **Preservatives:** 0.09% Sodium Azide
Applications:	**Western Blot:** Non-reducing conditions recommended. **Immunoprecipiation.** **Immunofluorescence.** **Flow Cytometry:** Use 10 µl of 1/50-1/100 diluted antibody to label 10^6 cells in 100 µl (Membrane permeabilization is required). Clone *FA-11* can be used in Flow Cytometry to detect intracellular CD68, following permeabilization, and can detect surface macrosialin at low levels in resident Mouse peritoneal macrophages which can be enhanced with thioglycollate stimulation. **Immunohistochemistry on Frozen Sections.** **Immunohistochemistry on Paraffin Sections.** Rat anti Mouse CD68 antibody, Clone *FA-11*, has been used in many mouse models for the identification of CD68 in immunohistochemical studies, using both frozen and paraffin-embedded tissues, *See Masaki, T. et al.* and *Devey, L. et al.* as examples. -This product may require antigen retrieval using heat treatment prior to staining of paraffin sections. Either sodium citrate buffer or Tris/EDTA buffer may be used for this purpose. See Martin-Manso for details.

For research and in vitro use only. Not for diagnostic or therapeutic work.
Material Safety Datasheets are available at www.acris-antibodies.com or on request.

-Staining has also been achieved without antigen retrieval, *See Lu et al.* for details. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

Clone FA-11 recognizes mouse macrosialin, a heavily glycosylated transmembrane protein and murine homolog of human CD68, which is classified as a unique scavenger receptor (ScR) family member, due to the presence of a lysosome associated membrane protein (LAMP)-like domain.

Storage:

Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

Product Citations:

Purchased from Acris:

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3. Jehle J, Hoyer FF, Schöne B, Pfeifer P, Schild K, Jenniches I, et al. Myeloid-Specific Deletion of Diacylglycerol Lipase α Inhibits Atherogenesis in ApoE-Deficient Mice. PLoS One. 2016 Jan 5;11(1):e0146267. doi: 10.1371/journal.pone.0146267. eCollection 2016. PubMed PMID: 26731274.
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General Readings:

1. Ramprasad MP, Terpstra V, Kondratenko N, Quehenberger O, Steinberg D. Cell surface expression of mouse macrosialin and human CD68 and their role as macrophage receptors for oxidized low density lipoprotein. Proc Natl Acad Sci U S A. 1996 Dec 10;93(25):14833-8. PubMed PMID: 8962141.
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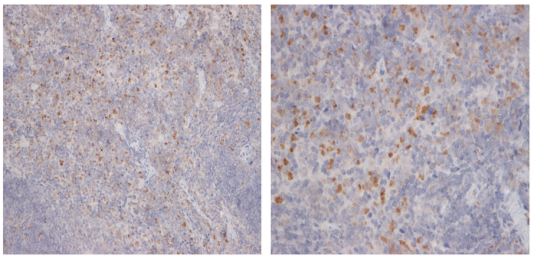
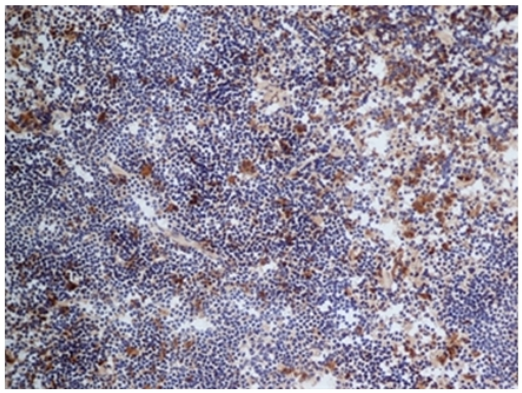
Pictures:

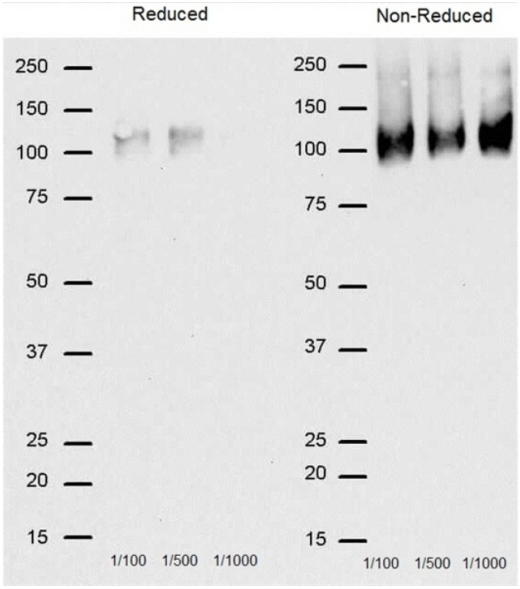
Staining of FFPE Mouse spleen with Rat anti Mouse CD68 Antibody Cat.-No SM1550PS (Clone FA-11) at 2 µg/ml. Antibody positive in cytoplasm of macrophages.



Staining of Mouse spleen cryosection with Rat anti Mouse CD68 Antibody Cat.-No SM1550PS (Clone FA-11) followed by Goat anti Rat IgG:HRP showing staining of Macrophages in the red pulp.



Western Blot analysis of CD68 expression on J774 cells usingRat anti Mouse CD68 Antibody Cat.-No SM1550PS (Clone FA-11) with Goat anti Rat IgG:HRP (SP1020HRP) as a detection antibody



Staining of permeabilised Mouse peritoneal Macrophages cells with Rat anti Mouse CD68 Antibody Cat.-No SM1550PS (Clone FA-11) visualised with F(ab')2 Goat Anti Rat IgG:FITC (Mouse Adsorbed) (SP1022F).