CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	CD68, Mouse, clone FA-11		
Catalog number	HM1070-20UG		
Lot number	-	**Expiry date**	-
Volume	200 µl	**Amount**	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Rat IgG2a	**Conjugate**	None
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	2,6,7		1,5	3			1,4	2,4,5
Yes	●		●	●			●	●
No		●						
N.D.					●	●		

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- FC: Antibody FA-11 stains both intra and extracellular macrosialin. For intracellular staining THP-1 cells were permeabilized with buffer containing 0.5% saponin. The THP-1 cells were treated an Fc receptor blocking solution to block nonspecific binding. As negative control an isotype matched control IgG was used. (Ref.3)
- W: A non-reduced sample treatment and SDS-Page was used. The band sizes are 75-120kDa depending on glycosylation pattern of macrosialin. (Ref.5).
- IHC-F: 5µM tissue sections were fixed in acetone for 10 minutes at room temperature. As negative controls primary antibodies were omitted or replaced by rat mAbs to unrelated antigens (Ref.2).
- Positive control: murine macrophage-like cell line RAW264.7 (Ref. 5); Negative control: COS-7 cell line (Ref. 5).

General Information

Description

The monoclonal antibody FA-11 reacts with murine macrosialin (mouse CD68), a heavily glycosylated transmembrane protein of 87- 115 kDa, which is specifically expressed by tissue macrophages, Langerhans cells and at low levels by dendritic cells. Macrosialin belongs to the lysosomal-associated membrane protein (LAMP) family. In common with the LAMPs, macrosialin is a type I membrane protein, containing a short and highly conserved cytoplasmic tail, followed by a transmembrane domain that precedes the intraluminal region. In macrophages, macrosialin is mainly expressed as a late endosomal protein and rapidly exchanges with a small subset of macrosialin present on the cell surface. Several reports have shown that macrosialin recognises oxidized low-density lipoproteins as well as the intercellular adhesive molecule (ICAM-L) raising the possibility of a receptor function of this protein. In human, macrosialin has been suggested to be a novel prognostic factor for classical Hodgkin's lymphoma since high expression of macrosialin and CD163 correlates with adverse outcome.
The monoclonal antibody FA-11 detects surface macrosialin at low levels in resident mouse peritoneal macrophages which can be enhanced by thiolycollate stimulation. Macrosialin is predominantly located within the cell and can be detected by flow cytometry with the monoclonal antibody FA-11 when cell permeabilisation is used.

Immunogen

Purified glycoproteins from P815 cell line

Aliases

CD68 antigen gp110, Macrosialin

References

1. Smith, M et al; Differential expression of murine macrophage surface glycoprotein antigens in intracellular membranes. J Cell Sci 1987, *87*:113
2. Rabinowitz, S et al; Macrosialin, a macrophage-restricted sialoprotein differentially glycosylated in response to inflammatory stimuli. J Exp Med 1991, *174*: 827
3. Ramprasad, M et al; Cell surface expression of mouse macrosialin and human CD68 and their role as macrophage receptors for oxidized low density lipoprotein. Proc Natl Acad Sci 1996, *93*: 14833
4. Da Silva, R et al; Phagocytosis stimulates alternative glycolysation of macrosialin (mouse CD68), a macrophage-specific endosomal protein. Biochem J 1999, *338*: 687
5. De Beer, M et al; Lack of a direct role for macrosialin in oxidized LDL metabolism. J Lipid Res 2003, *44*: 674

6. Apostolopoulos, J et al; The cytoplasmic domain of tissue factor in macrophages augments cutaneous delayed-type hypersensitivity. J Leukoc Biol 2008, *83*: 90
7. Rickard, A et al; Deletion of Mineralocorticoid Receptors From Macrophages Protects Against Deoxycorticosterone/Salt-Induced Cardiac Fibrosis and Increased Blood Pressure. Hypertension 2009, *54*: 537

Storage&stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

Precautions For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC	Date
Brenda Teunissen	28/10/2020

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.