

## Datasheet: MCA1957EL

<b>Description:</b>	RAT ANTI MOUSE CD68:Endotoxin Low
<b>Specificity:</b>	CD68
<b>Other names:</b>	MACROSIALIN
<b>Format:</b>	Low Endotoxin
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	FA-11
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	0.5 mg

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry (1)	▪			1/50 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin (2)	▪			
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting (3)	▪			
Immunofluorescence	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

(1) **Membrane permeabilisation is required for this application. Bio-Rad recommends the use of Leucoperm™ (Product Code [BUF09](#)) for this purpose.**

(2) **This product may require antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose. See [Martin-Manso](#) for details. Staining has also been achieved without antigen retrieval, see [Lu](#) for details.**

(3) **Non-reducing conditions recommended.**

<b>Target Species</b>	Mouse
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	None present

<b>Carrier Free</b>	Yes
<b>Endotoxin Level</b>	<0.01EU/ug
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0mg/ml
<b>Immunogen</b>	Purified Concanavalin A acceptor glycoprotein from P815 cell line.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P31996</a>   <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">12514</a> Cd68   <a href="#">Related reagents</a></p>
<b>Specificity</b>	<p><b>Rat anti Mouse CD68 antibody, clone FA-11</b> 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.</p> <p>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.</p> <p>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.</p> <p>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 (<a href="#">Masaki <i>et al.</i> 2003</a>) and (<a href="#">Devey <i>et al.</i> 2009</a>).</p> <p>Rat anti mouse CD68 antibody, 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.</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label $1 \times 10^6$ cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>Ramprasad, M.P. <i>et al.</i> (1996) Cell surface expression of mouse macrosialin and human CD68 and their role as macrophage receptors for oxidized low density lipoprotein. <a href="#">Proc Natl Acad Sci U S A. 93 (25): 14833-8.</a></li> <li>Rabinowitz, S.S. &amp; Gordon, S. (1991) Macrosialin, a macrophage-restricted membrane sialoprotein differentially glycosylated in response to inflammatory stimuli. <a href="#">J Exp Med. 174 (4): 827-36.</a></li> <li>da Silva, R.P. &amp; Gordon, S. (1999) Phagocytosis stimulates alternative glycosylation of macrosialin (mouse CD68), a macrophage-specific endosomal protein. <a href="#">Biochem J. 338 ( Pt 3): 687-94.</a></li> <li>Schleicher, U. <i>et al.</i> (2005) Minute numbers of contaminant CD8+ T cells or CD11b+CD11c+ NK cells are the source of IFN-<math>\gamma</math> in IL-12/IL-18-stimulated mouse macrophage populations. <a href="#">Blood 105: 1319-1328.</a></li> </ol>

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**Storage**

Store at -20°C only.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

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**Shelf Life**

18 months from date of despatch.

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**Health And Safety Information**

Material Safety Datasheet documentation #10162 available at: 10162: <https://www.bio-rad-antibodies.com/uploads/MSDS/10162.pdf>

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	<a href="#">DyLight®800</a>
Goat Anti Rat IgG (STAR73...)	<a href="#">RPE</a>
Rabbit Anti Rat IgG (STAR21...)	<a href="#">HRP</a>
Rabbit Anti Rat IgG (STAR17...)	<a href="#">FITC</a>
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	<a href="#">DyLight®649</a> , <a href="#">DyLight®800</a>
Goat Anti Rat IgG (STAR131...)	<a href="#">Alk. Phos.</a> , <a href="#">Biotin</a>
Goat Anti Rat IgG (STAR69...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR72...)	<a href="#">HRP</a>

### Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:Low Endotoxin \(MCA1212EL\)](#)

### Recommended Useful Reagents

[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025A\)](#)

[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025C\)](#)

[LEUCOPERM™ \(BUF09\)](#)

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Printed on 01 Aug 2018

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