

## Datasheet: MCA497RT

<b>Description:</b>	RAT ANTI MOUSE F4/80
<b>Specificity:</b>	F4/80
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	Cl:A3-1
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	25 µg

## 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	▪			1/50 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin (1)	▪			
Immunohistology - Resin	▪			
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting	▪			
Immunofluorescence	▪			
Radioimmunoassays	▪			
Immuno-electron Microscopy	▪			

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) **Rat anti Mouse F4/80 antibody, clone A3-1 requires pre-treatment of paraffin sections prior to staining. Proteinase K is recommended for tissues fixed for less than 24 hours. Citrate buffer pH 6.0 is recommended for tissues fixed for more than 24 hours. Please view the protocol at [Antigen Retrieval Techniques](#).**

<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>	0.09% Sodium Azide

<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Thioglycollate stimulated peritoneal macrophages from C57BL/6 mice.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q61549</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">13733</a>    Emr1    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	Gpf480
<b>RRID</b>	AB_1102558
<b>Fusion Partners</b>	Spleen cells from immunised HOB2 rats were fused with cells of the mouse NS1 myeloma cell line.
<b>Specificity</b>	<p><b>Rat anti mouse F4/80 antibody, clone Cl:A3-1</b> recognizes the <a href="#">murine F4/80 antigen</a>, a ~160 kDa cell surface glycoprotein member of the EGF-TM7 family of proteins which shares 68% overall amino acid identity with human EGF module-containing mucin-like hormone receptor 1 (EMR1).</p> <p>Expression of F4/80 is heterogeneous and is modulated during macrophage maturation and activation. The F4/80 antigen is expressed on a wide range of mature tissue macrophages including Kupffer cells, Langerhans cells, microglia, macrophages located in the gut lamina propria, peritoneal cavity, lung, thymus, bone marrow stroma and macrophages in the red pulp of the spleen (<a href="#">Hume, et al. 1984</a>). F4/80 antigen is also expressed on a subpopulation of dendritic cells but is absent from macrophages located in T cell areas of the spleen and lymph node (<a href="#">Gordon, et al. 1994</a>). The ligands and biological functions of the F4/80 antigen have not been fully determined but a role for F4/80 in the generation of efferent CD8+ve regulatory T cells is proposed (<a href="#">Lin, et al. 2005</a>)</p> <p>Rat anti mouse F4/80 antibody, clone Cl:A3-1 modulates cytokine levels released in response to <i>Listeria monocytogenes</i> (<a href="#">Warschkau &amp; Kiderlen, 1999</a>).</p> <p>A Human anti-idiotypic Cl:A31 antibody, clone 17867 (<a href="#">HCA154</a> ) which binds to and blocks activity of Rat anti mouse F4/80 antibody, clone Cl:A3-1 is also available for use as a control in experiments utilizing clone A3-1.</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>Gordon, S. <i>et al.</i> (1992) Antigen markers of macrophage differentiation in murine tissues. <a href="#">Curr Top Microbiol Immunol. 181: 1-37.</a></li> <li>Warschkau, H. &amp; Kiderlen, A.F. (1999) A monoclonal antibody directed against the murine macrophage surface molecule F4/80 modulates natural immune response to <i>Listeria monocytogenes</i>. <a href="#">J Immunol. 163 (6): 3409-16.</a></li> <li>Lin, H.H.<i>et al.</i> (2005) The macrophage F4/80 receptor is required for the induction of antigen-specific efferent regulatory T cells in peripheral tolerance. <a href="#">J Exp Med. 201 (10): 1615-25.</a></li> <li>Chan, R.J. <i>et al.</i> (2005) Human somatic PTPN11 mutations induce hematopoietic cell hypersensitivity to granulocyte-macrophage colony stimulating factor <a href="#">Blood. 105: 3737-3742.</a></li> <li>Moore, K.J. <i>et al.</i> (2000) Divergent response to LPS and bacteria in CD14-deficient murine</li> </ol>

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**Storage**

Store at +4°C or at -20°C if preferred.

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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**Guarantee**

12 months from date of despatch

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**Health And Safety Information**

Material Safety Datasheet documentation #10040 available at: 10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Rat IgG (STAR69...) [FITC](#)

Goat Anti Rat IgG2b (STAR114...) [HRP](#)

Goat Anti Rat IgG (H/L) (305001...) [HRP](#)

Goat Anti Rat IgG (STAR73...) [RPE](#)

### Recommended Useful Reagents

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

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

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