

## Datasheet: MCA497B

<b>Description:</b>	RAT ANTI MOUSE F4/80:Biotin
<b>Specificity:</b>	F4/80
<b>Format:</b>	Biotin
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	Cl:A3-1
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	0.1 mg

## Product Details

**RRID** AB\_322046

**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	■			Neat - 1/10

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.

**Target Species** Mouse

**Product Form** Purified IgG conjugated to Biotin - liquid

**Preparation** Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant

**Buffer Solution** Phosphate buffered saline

**Preservative** 0.09% Sodium Azide  
**Stabilisers** 1% Bovine Serum Albumin

**Approx. Protein Concentrations** IgG concentration 0.1 mg/ml

**Immunogen** Thioglycollate stimulated peritoneal macrophages from C57BL/6 mice.

### External Database Links

**UniProt:**  
[Q61549](#) [Related reagents](#)

**Entrez Gene:**  
[13733](#) Emr1 [Related reagents](#)

<b>Synonyms</b>	Gpf480
<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> recognises 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 macrophages. <a href="#">J Immunol. 165 (8): 4272-80.</a></li> <li>Dandekar, A.A.<i>et al.</i> (2004) Bystander CD8 T-cell-mediated demyelination is interferon-gamma-dependent in a coronavirus model of multiple sclerosis. <a href="#">Am J Pathol. 164: 363-9.</a></li> <li>Muto, A. <i>et al.</i> (2011) Eph-B4 prevents venous adaptive remodeling in the adult arterial environment. <a href="#">J Exp Med. 208 (3): 561-75.</a></li> <li>Pizza, F.X. <i>et al.</i> (2005) Neutrophils contribute to muscle injury and impair its resolution after lengthening contractions in mice. <a href="#">J Physiol. 562 (Pt 3): 899-913.</a></li> <li>Tarallo, V. <i>et al.</i> (2011) The biflavonoid amentoflavone inhibits neovascularization preventing the activity of proangiogenic vascular endothelial growth factors. <a href="#">J Biol Chem. 286: 19641-51.</a></li> <li>Rivollier, A. <i>et al.</i> (2012) Inflammation switches the differentiation program of Ly6Chi monocytes from antiinflammatory macrophages to inflammatory dendritic cells in the colon. <a href="#">J Exp Med. 209: 139-55.</a></li> <li>Hemmi, H. <i>et al.</i> (2009) A new triggering receptor expressed on myeloid cells (Trem) family member, Trem-like 4, binds to dead cells and is a DNAX activation protein 12-linked marker for subsets of mouse macrophages and dendritic cells. <a href="#">J Immunol. 182:1278-86.</a></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**

18 months from date of despatch.

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**Health And Safety Information**

Material Safety Datasheet documentation #10041 available at:  
10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

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**Regulatory**

For research purposes only

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## Related Products

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