

## Datasheet: MCA2748

<b>Description:</b>	RAT ANTI MOUSE CD36
<b>Specificity:</b>	CD36
<b>Other names:</b>	GPIV (IIIb)
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MF3
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	0.25 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	▪			Neat - 1/25
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting	▪			
Immunofluorescence	▪			

Where this product 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 product for use in their own system using appropriate negative/positive controls.

<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 (NaN <sub>3</sub> )

<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0mg/ml
<b>Immunogen</b>	IL-4 treated murine thioglycollate-elicited peritoneal macrophages
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q08857</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">12491</a> Cd36    <a href="#">Related reagents</a></p>
<b>RRID</b>	AB_2072640
<b>Fusion Partners</b>	Spleen cells from immunised DA rats were fused with cells of the Y3Ag 1.2.3 myeloma cell line
<b>Specificity</b>	<p><b>Rat anti Mouse CD36 antibody, clone MF3</b> recognizes mouse CD36, also known as platelet glycoprotein 4, glycoprotein IIIb or PAS IV. CD36 is an ~85 kDa multipass transmembrane glycoprotein primarily expressed on platelets, monocytes/macrophages, smooth muscle and endothelial cells. The CD36 molecule is type B scavenger receptor, which binds to multiple ligands including thrombospondin, anionic phospholipids, oxidized low density lipoproteins and long chain fatty acids.</p> <p>CD36 has diverse functions and is reported to play a role in innate immunity, platelet adhesion/aggregation and long chain fatty acid transport. The CD36 molecule also directly mediates cytoadhesion of erythrocytes infected with <i>Plasmodium falciparum</i>, and may be involved in the development of atherosclerotic lesions and the formation of foam cells.</p> <p>Rat anti Mouse CD36 antibody, clone MF3 has been shown to inhibit IL-4 induced thioglycollate-elicited peritoneal macrophage fusion and significantly block IL-4/GM-CSF-induced bone-marrow derived macrophage fusion.</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>1. Mwaikambo, B.R. <i>et al.</i> (2009) Hypoxia up-regulates CD36 expression and function via hypoxia-inducible factor-1- and phosphatidylinositol 3-kinase-dependent mechanisms. <a href="#">J Biol Chem. 284: 26695-707.</a></li> <li>2. Seeds, R.E. <i>et al.</i> (2011) The role of myeloid receptors on murine plasmacytoid dendritic cells in induction of type I interferon. <a href="#">Int Immunopharmacol. 11: 794-801.</a></li> <li>3. Yang, C.N. <i>et al.</i> (2011) Mechanism mediating oligomeric A<math>\beta</math> clearance by naïve primary microglia. <a href="#">Neurobiol Dis. 42 (3): 221-30.</a></li> <li>4. Zhou, D. <i>et al.</i> (2012) CD36 level and trafficking are determinants of lipolysis in adipocytes. <a href="#">FASEB J. 26 (11): 4733-42.</a></li> <li>5. Samovski, D. <i>et al.</i> (2012) Insulin and AMPK regulate FA translocase/CD36 plasma membrane recruitment in cardiomyocytes via Rab GAP AS160 and Rab8a Rab GTPase. <a href="#">J Biol Chem. 287 (12): 10000-10008.</a></li> </ol>

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9. Samovski, D. *et al.* (2015) Regulation of AMPK activation by CD36 links fatty acid uptake to  $\beta$ -oxidation. [Diabetes. 64 \(2\): 353-9.](#)

10. Nie, S. *et al.* (2015) Detection of atherosclerotic lesions and intimal macrophages using CD36-targeted nanovesicles. [J Control Release. pii: S0168-3659\(15\)30173-5.](#)

11. Lund, H. *et al.* (2018) Competitive repopulation of an empty microglial niche yields functionally distinct subsets of microglia-like cells. [Nat Commun. 9 \(1\): 4845.](#)

12. Sui, Y. *et al.* (2018) Perinatal Bisphenol A Exposure Increases Atherosclerosis in Adult Male PXR-Humanized Mice. [Endocrinology. 159 \(4\): 1595-608.](#)

13. Zhang, J. *et al.* (2019) Anti-atherogenic effects of CD36-targeted epigallocatechin gallate-loaded nanoparticles. [J Control Release. 303: 263-73.](#)

14. Dhanasekara, C.S. *et al.* (2021) Nanoparticles target intimal macrophages in atherosclerotic lesions. [Nanomedicine. 32: 102346.](#)

15. Liu, J. *et al.* (2022) Pregnane X Receptor Mediates Atherosclerosis Induced by Dicyclohexyl Phthalate in LDL Receptor-Deficient Mice [Cells. 11 \(7\): 1125](#)

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<b>Storage</b>	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.
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Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

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<b>Guarantee</b>	12 months from date of despatch
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2748">https://www.bio-rad-antibodies.com/SDS/MCA2748</a> 10040
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<b>Regulatory</b>	For research purposes only
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## Related Products

### Recommended Secondary Antibodies

Goat Anti Rat IgG (STAR69...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR73...)	<a href="#">RPE</a>
Rabbit Anti Rat IgG (STAR17...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR72...)	<a href="#">HRP</a>
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	<a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®800</a>
Rabbit Anti Rat IgG (STAR21...)	<a href="#">HRP</a>

Rabbit Anti Rat IgG (STAR16...)

[DyLight®800](#)

Goat Anti Rat IgG (STAR131...)

[Alk. Phos.](#), [Biotin](#)

## Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL \(MCA1212\)](#)

**North & South** Tel: +1 800 265 7376

**Worldwide**

Tel: +44 (0)1865 852 700

**Europe**

Tel: +49 (0) 89 8090 95 21

**America** Fax: +1 919 878 3751

Fax: +44 (0)1865 852 739

Fax: +49 (0) 89 8090 95 50

Email: [antibody\\_sales\\_us@bio-rad.com](mailto:antibody_sales_us@bio-rad.com)

Email: [antibody\\_sales\\_uk@bio-rad.com](mailto:antibody_sales_uk@bio-rad.com)

Email: [antibody\\_sales\\_de@bio-rad.com](mailto:antibody_sales_de@bio-rad.com)

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)

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