

## Datasheet: MCA1053GT

**BATCH NUMBER 1707**

<b>Description:</b>	MOUSE ANTI HUMAN CD48
<b>Specificity:</b>	CD48
<b>Other names:</b>	BLAST-1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MEM-102
<b>Isotype:</b>	IgG1
<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	▪			
Immunohistology - Frozen	▪			1/50 - 1/100
Immunohistology - Paraffin	▪			
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting (1)	▪			
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)This product recognizes CD48 under non-reducing conditions.**

### Target Species

Human

### Species Cross Reactivity

Reacts with: Rhesus Monkey

**N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

### Product Form

Purified IgG - liquid

<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P09326</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">962</a>    CD48    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	BCM1, BLAST1
<b>RRID</b>	AB_1102104
<b>Specificity</b>	<p><b>Mouse anti Human CD48 antibody, clone MEM-102</b> recognizes human CD48, also known as B-lymphocyte activation marker BLAST-1, BCM1 surface antigen, Leukocyte antigen MEM-102, SLAM family member 2 or Signaling lymphocytic activation molecule 2. CD 48, as a mature molecule is a 193 amino acid, ~45 kDa cell membrane glycoprotein containing 2 Ig-like domains.</p> <p>CD48 acts as a counter-receptor for CD2 (<a href="#">Kato et al. 1992</a>) and is involved in immune regulation and tolerance (<a href="#">McArdel et al. 2016</a>)</p> <p>Mouse anti Human CD48 antibody, clone MEM-102 is useful for the visualisation of CD48 expressing cells by immunofluorescence (<a href="#">Enose-Akahata et al. 2009</a>) and flow cytometry and may be used in studies to differentiate haemopoietic tumors, sarcomas and melanomas.</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul
<b>Immunohistology</b>	This product does not require protein digestion pre-treatment of paraffin sections. This product does not require antigen retrieval using heat treatment prior to staining of paraffin sections.
<b>Histology Positive Control Tissue</b>	Tonsil
<b>References</b>	<ol style="list-style-type: none"> <li>Horejsí, V. <i>et al.</i> (1988) Monoclonal antibodies against human leucocyte antigens. II. Antibodies against CD45 (T200), CD3 (T3), CD43, CD10 (CALLA), transferrin receptor (T9), a novel broadly expressed 18-kDa antigen (MEM-43) and a novel antigen of restricted expression (MEM-74). <a href="#">Folia Biol (Praha)</a>. 34 (1): 23-34.</li> <li>Korínek, V. <i>et al.</i> (1991) The human leucocyte antigen CD48 (MEM-102) is closely</li> </ol>

- related to the activation marker Blast-1. [Immunogenetics. 33 \(2\): 108-12.](#)
3. Cinek, T. & Horejsí, V. (1992) The nature of large noncovalent complexes containing glycosyl-phosphatidylinositol-anchored membrane glycoproteins and protein tyrosine kinases. [J Immunol. 149 \(7\): 2262-70.](#)
  4. Staffler, G. *et al.* (2003) Selective inhibition of T cell activation via CD147 through novel modulation of lipid rafts. [J Immunol. 171 \(4\): 1707-14.](#)
  5. Larochelle, A. *et al.* (2011) Human and rhesus macaque hematopoietic stem cells cannot be purified based only on SLAM family markers. [Blood. 117:1550-4.](#)
  6. Enose-Akahata, Y. *et al.* (2009) High expression of CD244 and SAP regulated CD8 T cell responses of patients with HTLV-I associated neurologic disease. [PLoS Pathog. 5: e1000682.](#)
  7. Fukushima, K. *et al.* (2005) Functional role played by the glycosylphosphatidylinositol anchor glycan of CD48 in interleukin-18-induced interferon-gamma production. [J Biol Chem. 280: 18056-62.](#)
  8. Kanuga, N. *et al.* (2002) Characterization of genetically modified human retinal pigment epithelial cells developed for in vitro and transplantation studies. [Invest Ophthalmol Vis Sci. 43: 546-55.](#)
  9. Peterson, L.A. *et al.* (2019) Individual differences in the response of human  $\beta$ -lymphoblastoid cells to the cytotoxic, mutagenic and DNA damaging effects of a DNA methylating agent, *N*-methylnitrosourea. [Chem Res Toxicol. Oct 07 \[Epub ahead of print\].](#)

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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: <https://www.bio-rad-antibodies.com/SDS/MCA1053GT>  
10040

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

- |   |                      |
|---|----------------------|
| Rabbit Anti Mouse IgG (STAR12...)       | <a href="#">RPE</a>  |
| Goat Anti Mouse IgG IgA IgM (STAR87...) | <a href="#">HRP</a>  |
| Goat Anti Mouse IgG (STAR76...)         | <a href="#">RPE</a>  |
| Rabbit Anti Mouse IgG (STAR13...)       | <a href="#">HRP</a>  |
| Goat Anti Mouse IgG (STAR70...)         | <a href="#">FITC</a> |

Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),  
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),  
[FITC](#), [HRP](#)

Rabbit Anti Mouse IgG (STAR9...) [FITC](#)

Goat Anti Mouse IgG (STAR77...) [HRP](#)

Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)

### **Recommended Negative Controls**

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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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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