

## Datasheet: MCA2071GA

**BATCH NUMBER 149998**

<b>Description:</b>	MOUSE ANTI HUMAN CD80
<b>Specificity:</b>	CD80
<b>Other names:</b>	B7-1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MEM-233
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.1 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	▪			
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting	▪			Non-reducing conditions

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.

<b>Target Species</b>	Human
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A
<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="#">P33681</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">941</a>    CD80    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	CD28LG, CD28LG1, LAB7
<b>RRID</b>	AB_323726
<b>Specificity</b>	<p><b>Mouse anti Human CD80 antibody, clone MEM-233</b> recognizes human CD80, also known as B7-1, a ~60 kDa type 1 trans-membrane protein expressed of macrophages, dendritic cells (<a href="#">Munro et al. 1994</a>) and activated B-cells (<a href="#">Ranheim et al. 1993</a>)</p> <p>CD80 is a member of the immunoglobulin superfamily having an extracellular domain bearing both a single <a href="#">Ig-v-like</a> domain, a single <a href="#">Ig-c-like</a> domain, a transmembrane sequence and a short cytoplasmic domain. Although the predicted molecular weight for human CD80 is ~33 kDa, the presence of multiple (8) potential N-glycosylation sites (<a href="#">Chen et al. 1998</a>) results in a migration corresponding to ~60 kDa.</p> <p>Human CD80 along with CD86 act as co-stimulatory molecules and are both ligands for CD28 and CTLA-4 (<a href="#">Azuma et al. 1993</a>) involved in T cell activation and proliferation (<a href="#">Vasu et al. 2003</a>). Although CD80 binds to the same receptors as CD86 it displays quite different characteristics in its avidity and binding kinetics (<a href="#">van der Merwe et al. 1997</a>).</p> <p>Site mutagenesis studies indicate residues in both the Ig-v-like and Ig-c-like domains of CD80 are crucial for the interaction with it's receptors CTLA-4 and CD28 (<a href="#">Peach et al. 1995</a>).</p> <p>Mouse anti human CD80 antibody, clone MEM-233 binds to residues within the Ig-v-like domain of human CD80 as shown by domain switching studies (<a href="#">Vasu et al. 2003</a>).</p> <p>Functional studies using Mouse anti Human CD80, clone MEM-233 in combination with Mouse anti Human CD86, clone Bu63 (<a href="#">MCA1118</a>) suggest that clone MEM-233 is able to block binding of human CD80 with it's cognate ligands CD28 and CTLA-4 (<a href="#">Morbach et al. 2011</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells or 100ul whole blood.
<b>References</b>	<ol style="list-style-type: none"> <li>Zhan, H. <i>et al.</i> (2003) The immunomodulatory role of human conjunctival epithelial cells. <a href="#">Invest Ophthalmol Vis Sci. 44 (9): 3906-10.</a></li> <li>Angel, C.E. <i>et al.</i> (2006) Cutting edge: CD1a+ antigen-presenting cells in human dermis respond rapidly to CCR7 ligands. <a href="#">J Immunol. 176 (10): 5730-4.</a></li> <li>Daubenberger, C.A. <i>et al.</i> (2007) Flow cytometric analysis on cross-reactivity of human-</li> </ol>

- specific CD monoclonal antibodies with splenocytes of *Aotus nancymaae*, a non-human primate model for biomedical research. [Vet Immunol Immunopathol. 119 \(1-2\): 14-20.](#)
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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 protein. 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/MCA2071GA>  
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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...) [HRP](#)  
 Rabbit Anti Mouse IgG (STAR12...) [RPE](#)  
 Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)  
 Goat Anti Mouse IgG (STAR76...) [RPE](#)  
 Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)  
 Rabbit Anti Mouse IgG (STAR13...) [HRP](#)  
 Goat Anti Mouse IgG (STAR70...) [FITC](#)  
 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](#)

## 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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