

Datasheet: MCA5779GA

**BATCH NUMBER 159418**

<b>Description:</b>	MOUSE ANTI BOVINE CD28
<b>Specificity:</b>	CD28
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	CC219
<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	▪			1/25 - 1/200
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	

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>	Bovine
<b>Product Form</b>	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>Carrier Free</b>	Yes

<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Plasmid DNA encoding the bovine CD28 gene
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q28071</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">281050</a>    CD28    <a href="#">Related reagents</a></p>
<b>Fusion Partners</b>	Spleen cells from immunized Balb/c mice were fused with cells of the SP/2/0 myeloma cell line
<b>Specificity</b>	<p><b>Mouse anti Bovine CD28, clone CC219</b>, recognizes the bovine homologue of human CD28, a co-stimulatory cell surface molecule expressed by T cell subsets. CD28 is the receptor for CD80 (B7.1) and CD86 (B7.2). CD28 is involved in increased production of IL-4 and IL-10 in T cells.</p> <p>Mouse anti Bovine CD28, clone CC219 is able to stimulate bovine T cells in combination with anti-bovine CD3. For functional assays it is recommended to use the low endotoxin and preservative free format of this antibody, <a href="#">MCA5779EL</a>.</p> <p>Mouse anti Bovine CD28, clone CC219 has previously been published under the alternative clone designation F848EC4 (<a href="#">Hogg et al. 2011</a>).</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>Hogg, A.E. <i>et al.</i> (2011) Characterization of age-related changes in bovine CD8+ T-cells. <a href="#">Vet Immunol Immunopathol. 140 (1-2): 47-54.</a></li> <li>Palomo, F.R. (2015) Study of the Effects Caused by BVDV and BHV-1 on Antigen-Presenting Cells by Means of <i>In Vivo</i> and <i>In Vitro</i> Experimental Models. <a href="#">Tesis Doctoral, Facultad de Veterinaria, Universidad de Córdoba</a></li> <li>Risalde, M.A. <i>et al.</i> (2020) BVDV permissiveness and lack of expression of co-stimulatory molecules on PBMCs from calves pre-infected with BVDV. <a href="#">Comp Immunol Microbiol Infect Dis. 68: 101388.</a></li> </ol>
<b>Storage</b>	<p>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.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.</p>
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at:

---

**Regulatory**

For research purposes only

---

## 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...)	<a href="#">Alk. Phos.</a> , <a href="#">DyLight®488</a> , <a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®680</a> , <a href="#">DyLight®800</a> , <a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>

### 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>
----------------------------------	---	------------------	---	---------------	---

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

'M381321:210512'

Printed on 18 Jan 2024