

## Datasheet: MCA2042GA

<b>Description:</b>	MOUSE ANTI BOVINE CD63
<b>Specificity:</b>	CD63
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	CC25
<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	▪			1/10 - 1/25
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 A 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 1.0 mg/ml
<b>Immunogen</b>	Bovine PBMC
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q9XSK2</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">404156</a>    CD63    <a href="#">Related reagents</a></p>
<b>Specificity</b>	<p><b>Mouse anti Bovine CD63 antibody, clone CC25</b> recognizes the bovine homologue of human CD63, a 237 amino acid multipass transmembrane glycoprotein and member of the tetraspanin TM4SF protein family with a predicted molecular weight of ~26 kDa. CD63 is also known as lysosome associated membrane glycoprotein 3 or LAMP-3.</p> <p>CD63 along with other TM4SF members including CD9, CD61 and CD151 can form specific interactions with phosphoinositide 4-kinase, suggesting a role for CD63 in the recruitment of phosphoinositide 4-kinase to specific membrane sites (<a href="#">Yauch and Hemler 2000</a>). CD63 is expressed on the cell surface of platelets and basophils, along with activated macrophages, monocytes and granulocytes.</p> <p>Mouse anti Bovine CD63, clone CC25 acts as a specific marker for bovine lysosomes and has been used for the identification and quantitation of phagosome-lysosome fusion in models of bacterial insult (<a href="#">Souza et al. 2013</a>).</p>
<b>Flow Cytometry</b>	Use 10µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100µl
<b>References</b>	<ol style="list-style-type: none"> <li>1. Brooke, G.P. <i>et al.</i> (1999) Molecular cloning of cattle CD63 and evidence for high level expression on subpopulations of dendritic cells. <a href="#">Immunogenetics. 49 (9): 812-4.</a></li> <li>2. Colino, J. and Snapper, C.M. (2006) Exosomes from bone marrow dendritic cells pulsed with diphtheria toxoid preferentially induce type 1 antigen-specific IgG responses in naive recipients in the absence of free antigen. <a href="#">J Immunol. 177: 3757-62.</a></li> <li>3. Souza, C.D. <i>et al.</i> (2007) Role of the mitogen-activated protein kinase pathway in the differential response of bovine monocytes to <i>Mycobacterium avium</i> subsp. paratuberculosis and <i>Mycobacterium avium</i> subsp. avium. <a href="#">Microbes Infect. 9: 1545-52.</a></li> <li>4. Souza, C. <i>et al.</i> (2013) Mannosylated lipoarabinomannans from <i>Mycobacterium avium</i> subsp. Paratuberculosis alters the inflammatory response by bovine macrophages and suppresses killing of mycobacterium avium subsp. Avium organisms. <a href="#">PLoS One 8: e75924.</a></li> <li>5. Wolf, T. <i>et al.</i> (2015) The Intestinal Transport of Bovine Milk Exosomes Is Mediated by Endocytosis in Human Colon Carcinoma Caco-2 Cells and Rat Small Intestinal IEC-6 Cells. <a href="#">J Nutr. 145 (10): 2201-6.</a></li> <li>6. Weiss, D.J. <i>et al.</i> (2008) Bovine monocyte TLR2 receptors differentially regulate the intracellular fate of <i>Mycobacterium avium</i> subsp. paratuberculosis and <i>Mycobacterium avium</i> subsp. avium. <a href="#">J Leukoc Biol. 83: 48-55.</a></li> <li>7. Kusuma, R.J. <i>et al.</i> (2016) Human vascular endothelial cells transport foreign</li> </ol>

- exosomes from cow's milk by endocytosis. [Am J Physiol Cell Physiol. 310 \(10\): C800-7.](#)
8. Carretta MD *et al.* (2016) Butyric acid stimulates bovine neutrophil functions and potentiates the effect of platelet activating factor. [Vet Immunol Immunopathol. 176: 18-27.](#)
9. Mobley, C.B. *et al.* (2017) Whey protein-derived exosomes increase protein synthesis and hypertrophy in C<sub>2</sub>-C<sub>12</sub> myotubes. [J Dairy Sci. 100 \(1\): 48-64.](#)
10. Gillan, V. *et al.* (2019) Characterisation of infection associated microRNA and protein cargo in extracellular vesicles of *Theileria annulata*. infected leukocytes. [Cell Microbiol. 21 \(1\): e12969.](#)
11. Fiorenza, M.F. *et al.* (2021) Neutrophils recognize and amplify IFNT signals derived from day 7 bovine embryo for stimulation of ISGs expression *in vitro*.: A possible implication for the early maternal recognition of pregnancy. [Biochem Biophys Res Commun. 553: 37-43.](#)

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**Storage** 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.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

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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: 10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

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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 (STAR70...) [FITC](#)
- Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)
- Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
- Goat Anti Mouse IgG (STAR76...) [RPE](#)
- 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 (STAR13...) [HRP](#)
- Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)

### Recommended Negative Controls

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

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