

## Datasheet: MCA1097GA

**BATCH NUMBER 172889**

<b>Description:</b>	MOUSE ANTI SHEEP CD31
<b>Specificity:</b>	CD31
<b>Other names:</b>	PECAM-1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	CO.3E1D4
<b>Isotype:</b>	IgG2a
<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 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>	Sheep
<b>Species Cross Reactivity</b>	<p>Reacts with: Goat, Bovine</p> <p><b>N.B.</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.</p>
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture

supernatant

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<b>Buffer Solution</b>	Phosphate buffered saline
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<b>Preservative Stabilisers</b>	0.09% sodium azide (NaN <sub>3</sub> )
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<b>Carrier Free</b>	Yes
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<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
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<b>Immunogen</b>	Ovine leucocytes.
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<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells of the SP2-0/Ag14 mouse myeloma cell line.
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<b>Specificity</b>	<p><b>Mouse anti Sheep CD31 antibody, clone CO.3E1D4</b> recognizes ovine CD31, also known as PECAM-1.</p> <p>Ovine CD31 is predominantly expressed by peripheral blood platelets and a small percentage of lymphocytes. CD31 is also highly expressed by ovine endothelial cells.</p> <p>Mouse anti Sheep CD31 antibody, clone CO.3E1D4 is reported to inhibit homotypic leucocyte aggregation induced by anti CD43 antibodies (<a href="#">Pintado et al. 1995</a>).</p>
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<b>Flow Cytometry</b>	Use 10µl of the suggested working dilution to label 1 x 10 <sup>6</sup> cells in 100µl
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<b>References</b>	<ol style="list-style-type: none"><li>1. Brodersen, R. <i>et al.</i> (1998) Analysis of the immunological cross reactivities of 213 well characterized monoclonal antibodies with specificities against various leucocyte surface antigens of human and 11 animal species: <a href="#">Vet. Immunol. Immunopathol. 64: 1-13.</a></li><li>2. Newland, A. <i>et al.</i> (2004) Ovine dendritic cells transduced with an adenoviral CTLA4eEGFP fusion protein construct induce hyporesponsiveness to allostimulation. <a href="#">Immunology. 113: 310-7.</a></li><li>3. Summers, C. <i>et al.</i> (2005) An influx of macrophages is the predominant local immune response in ovine pulmonary adenocarcinoma. <a href="#">Vet Immunol Immunopathol. 106 (3-4): 285-94.</a></li><li>4. Zannettino, A.C. <i>et al.</i> (2010) Comparative assessment of the osteoconductive properties of different biomaterials <i>in vivo</i> seeded with human or ovine mesenchymal stem/stromal cells. <a href="#">Tissue Eng Part A. 16 (12): 3579-87.</a></li><li>5. De Visscher, G. <i>et al.</i> (2010) Selection of an immunohistochemical panel for cardiovascular research in sheep. <a href="#">Appl Immunohistochem Mol Morphol. 18: 382-91.</a></li><li>6. Filby, C.E. <i>et al.</i> (2010) Partial pulmonary embolization disrupts alveolarization in fetal sheep. <a href="#">Respir Res. 11: 42.</a></li><li>7. Boos, A.M. <i>et al.</i> (2011) Directly auto-transplanted mesenchymal stem cells induce bone formation in a ceramic bone substitute in an ectopic sheep model. <a href="#">J Cell Mol Med. 15 (6): 1364-78.</a></li><li>8. Berardinelli, P. <i>et al.</i> (2013) Role of amniotic fluid mesenchymal cells engineered on</li></ol>
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10. Lasecka L *et al.* (2015) Antibodies to the core proteins of nairobi sheep disease virus/ganjam virus reveal details of the distribution of the proteins in infected cells and tissues. [PLoS One. 10 \(4\): e0124966.](#)
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12. Weigand, A. *et al.* (2017) Bone Tissue Engineering Under Xenogeneic-Free Conditions in a Large Animal Model as a Basis for Early Clinical Applicability. [Tissue Eng Part A. 23 \(5-6\): 208-22.](#)
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14. López-Fernández, A. *et al.* (2020) Effect of Allogeneic Cell-Based Tissue-Engineered Treatments in a Sheep Osteonecrosis Model. [Tissue Eng Part A. 26 \(17-18\): 993-1004.](#)
15. Zhang, T.M. *et al.* (2024) YAP promotes the early development of temporomandibular joint bony ankylosis by regulating mesenchymal stem cell function. [Sci Rep. 14 \(1\): 12704.](#)
16. Haidar-Montes, A.A. *et al.* (2024) Mechanobiological Strategies to Enhance Ovine (*Ovis aries*) Adipose-Derived Stem Cells Tendon Plasticity for Regenerative Medicine and Tissue Engineering Applications. [Animals \(Basel\). 14 \(15\)Jul 31 \[Epub ahead of print\].](#)
17. Park, S. *et al.* (2026) Machine learning framework for passage-based quality control of Hanwoo muscle satellite cells for cultured meat. [Food Res Int. 231 \(Pt 2\): 118616.](#)

<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.  Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1097GA">https://www.bio-rad-antibodies.com/SDS/MCA1097GA</a>
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Secondary Antibodies

- Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)
- Goat Anti Mouse IgG (STAR70...) [FITC](#)
- Goat Anti Mouse IgG (STAR77...) [HRP](#)

Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</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>

**Product inquiries:** [www.bio-rad-antibodies.com/technical-support](http://www.bio-rad-antibodies.com/technical-support)

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

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