

## Datasheet: MCA1097F

**BATCH NUMBER 161766**

|                      |                            |
|----------------------|----------------------------|
| <b>Description:</b>  | MOUSE ANTI SHEEP CD31:FITC |
| <b>Specificity:</b>  | CD31                       |
| <b>Other names:</b>  | PECAM-1                    |
| <b>Format:</b>       | FITC                       |
| <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 | ▪   |    |                | Neat               |

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.

### Target Species

Sheep

### Species Cross Reactivity

Reacts with: Goat, Bovine

**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 conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

| Max Ex/Em | Fluorophore | Excitation Max (nm) | Emission Max (nm) |
|-----------|-------------|---------------------|-------------------|
|           | FITC        | 490                 | 525               |

### Preparation

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<br>1% Bovine Serum Albumin   |
| <b>Approx. Protein Concentrations</b> | IgG concentration 0.1 mg/ml   |
| <b>Immunogen</b>                      | Ovine leucocytes.   |
| <b>RRID</b>                           | AB_566719   |
| <b>Fusion Partners</b>                | Spleen cells from immunised BALB/c mice were fused with cells of the SP2-0/Ag14 mouse myeloma cell line.  |
| <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>  |
| <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>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. Pintado, C. O. <i>et al.</i> (1995) A monoclonal antibody to an ovine gp130 molecule inhibits homotypic aggregation induced by anti CD43 monoclonal antibodies of ruminant leukocytes. <a href="#">Immunol. Lett. 45: 81 - 85.</a></li> <li>3. 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>4. Newland, A. <i>et al.</i> (2004) Ovine dendritic cells transduced with an adenoviral CTLA4eGFP fusion protein construct induce hyporesponsiveness to allostimulation. <a href="#">Immunology. 113: 310-7.</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. Berardinelli, P. <i>et al.</i> (2013) Role of amniotic fluid mesenchymal cells engineered on MgHA/collagen-based scaffold allotransplanted on an experimental animal study of sinus augmentation. <a href="#">Clin Oral Investig. 17 (7): 1661-75.</a></li> <li>8. 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> </ol> |

9. 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.](#)
10. Boos, A.M. *et al.* (2011) Directly auto-transplanted mesenchymal stem cells induce bone formation in a ceramic bone substitute in an ectopic sheep model. [J Cell Mol Med. 15 \(6\): 1364-78.](#)
11. van Spreeuwel, A.C.C. (2008) Obtaining pure ovine endothelial and myofibroblast cell cultures [BMTE 08.49](#)
12. Iablonskii, P. *et al.* (2015) Tissue-engineered mitral valve: morphology and biomechanics †. [Interact Cardiovasc Thorac Surg. 20 \(6\): 712-9; discussion 719.](#)
13. 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.](#)
14. Nielsen, E.Ø. *et al.* (2018) Optimizing Osteogenic Differentiation of Ovine Adipose-Derived Stem Cells by Osteogenic Induction Medium and FGFb, BMP2, or NELL1 *In Vitro*. [Stem Cells Int. 2018: 9781393.](#)
15. Barboni, B. *et al.* (2013) Synthetic bone substitute engineered with amniotic epithelial cells enhances bone regeneration after maxillary sinus augmentation. [PLoS One. 8 \(5\): e63256.](#)
16. 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.](#)

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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. This product is photosensitive and should be protected from light.

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA1097F>  
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**Regulatory** For research purposes only

## Related Products

### Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:FITC \(MCA929F\)](#)

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto:antibody_sales_us@bio-rad.com)

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