

Datasheet: MCA1097F

Description:	MOUSE ANTI SHEEP CD31:FITC
Specificity:	CD31
Other names:	PECAM-1
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	CO.3E1D4
Isotype:	IgG2a
Quantity:	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.

	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

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers	0.09% sodium azide (NaN ₃) 1% bovine serum albumin
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml
Immunogen	Ovine leucocytes.
RRID	AB_566719
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the SP2-0/Ag14 mouse myeloma cell line.
Specificity	<p>Mouse anti Sheep CD31 antibody, clone CO.3E1D4 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 (Pintado et al. 1995).</p>
Flow Cytometry	Use 10µl of the suggested working dilution to label 1 x 10 ⁶ cells in 100µl
References	<ol style="list-style-type: none"> 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: Vet. Immunol. Immunopathol. 64: 1-13. 2. Newland, A. <i>et al.</i> (2004) Ovine dendritic cells transduced with an adenoviral CTLA4eEGFP fusion protein construct induce hyporesponsiveness to allostimulation. Immunology. 113: 310-7. 3. Summers, C. <i>et al.</i> (2005) An influx of macrophages is the predominant local immune response in ovine pulmonary adenocarcinoma. Vet Immunol Immunopathol. 106 (3-4): 285-94. 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. Tissue Eng Part A. 16 (12): 3579-87. 5. De Visscher, G. <i>et al.</i> (2010) Selection of an immunohistochemical panel for cardiovascular research in sheep. Appl Immunohistochem Mol Morphol. 18: 382-91. 6. Filby, C.E. <i>et al.</i> (2010) Partial pulmonary embolization disrupts alveolarization in fetal sheep. Respir Res. 11: 42. 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. J Cell Mol Med. 15 (6): 1364-78. 8. 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. Clin Oral Investig. 17 (7): 1661-75. 9. Barboni, B. <i>et al.</i> (2013) Synthetic bone substitute engineered with amniotic epithelial cells enhances bone regeneration after maxillary sinus augmentation. PLoS One. 8 (5):

[e63256](#).

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](#).
11. lablonskii, P. *et al.* (2015) Tissue-engineered mitral valve: morphology and biomechanics †. [Interact Cardiovasc Thorac Surg. 20 \(6\): 712-9; discussion 719](#).
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](#).
13. 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](#).
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 \[Epub ahead of print\]](#).

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.

Guarantee

12 months from date of despatch

Health And Safety Information

Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA1097F>
10041

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

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

North & South America

Tel: +1 800 265 7376

Fax: +1 919 878 3751

Email: antibody_sales_us@bio-rad.com

Worldwide

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

Email: antibody_sales_uk@bio-rad.com

Europe

Tel: +49 (0) 89 8090 95 21

Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_de@bio-rad.com

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)

'M408094:221010'

