

Datasheet: MCA1097GA

BATCH NUMBER 161427

Description:	MOUSE ANTI SHEEP CD31
Specificity:	CD31
Other names:	PECAM-1
Format:	Purified
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	▪			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.

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 - liquid

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 (NaN₃)

Carrier Free Yes

Approx. Protein Concentrations IgG concentration 1.0 mg/ml

Immunogen Ovine leucocytes.

Fusion Partners Spleen cells from immunised BALB/c mice were fused with cells of the SP2-0/Ag14 mouse myeloma cell line.

Specificity **Mouse anti Sheep CD31 antibody, clone CO.3E1D4** recognizes ovine CD31, also known as PECAM-1.

Ovine CD31 is predominantly expressed by peripheral blood platelets and a small percentage of lymphocytes. CD31 is also highly expressed by ovine endothelial cells.

Mouse anti Sheep CD31 antibody, clone CO.3E1D4 is reported to inhibit homotypic leucocyte aggregation induced by anti CD43 antibodies ([Pintado et al. 1995](#)).

Flow Cytometry Use 10ul of the suggested working dilution to label 1 x 10⁶ cells in 100ul.

- References**
1. Brodersen, R. *et al.* (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. Pintado. C. O. *et al.* (1995) A monoclonal antibody to an ovine gp130 molecule inhibits homotypic aggregation induced by anti CD43 monoclonal antibodies of ruminant leukocytes. [Immunol. Lett. 45: 81 - 85.](#)
 3. Zannettino, A.C. *et al.* (2010) Comparative assessment of the osteoconductive properties of different biomaterials *in vivo* seeded with human or ovine mesenchymal stem/stromal cells. [Tissue Eng Part A. 16 \(12\): 3579-87.](#)
 4. Newland, A. *et al.* (2004) Ovine dendritic cells transduced with an adenoviral CTLA4eEGFP fusion protein construct induce hyporesponsiveness to allostimulation. [Immunology. 113: 310-7.](#)
 5. De Visscher, G. *et al.* (2010) Selection of an immunohistochemical panel for cardiovascular research in sheep. [Appl Immunohistochem Mol Morphol. 18: 382-91.](#)
 6. Filby, C.E. *et al.* (2010) Partial pulmonary embolization disrupts alveolarization in fetal sheep. [Respir Res. 11: 42.](#)
 7. Berardinelli, P. *et al.* (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.](#)
 8. Summers, C. *et al.* (2005) An influx of macrophages is the predominant local immune

response in ovine pulmonary adenocarcinoma. [Vet Immunol Immunopathol. 106 \(3-4\): 285-94.](#)

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.](#)

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.

Guarantee	12 months from date of despatch
------------------	---------------------------------

Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA1097GA 10040
--------------------------------------	---

Regulatory	For research purposes only
-------------------	----------------------------

Related Products

Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	HRP
Goat Anti Mouse IgG (STAR76...)	RPE
Rabbit Anti Mouse IgG (STAR13...)	HRP
Goat Anti Mouse IgG (STAR70...)	FITC

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 (STAR9...) [FITC](#)

Goat Anti Mouse IgG (STAR77...) [HRP](#)

Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)

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

'M382856:210513'

Printed on 18 Jan 2024

© 2024 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)