

Datasheet: MCA1649A647

Description:	MOUSE ANTI BOVINE CD62L:Alexa Fluor® 647		
Specificity:	CD62L		
Other names:	LECAM-1, L-SELECTIN		
Format:	ALEXA FLUOR® 647		
Product Type:	Monoclonal Antibody		
Clone:	CC32		
Isotype:	lgG1		
Quantity:	100 TESTS/1ml		

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 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.

Target Species	Bovine			
Species Cross	Reacts with: Shee	p		
Reactivity	reactivity is derived	ctivity and working conditi d from testing within our la cations from the originato	aboratories, peer-r	eviewed publications or
Product Form	Purified IgG conjug	gated to Alexa Fluor 647	- liquid	
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nn	n)
	Alexa Fluor®647	650	665	
Preparation	Purified IgG prepa supernatant	red by affinity chromatog	raphy on Protein A	from tissue culture
Buffer Solution	Phosphate buffere	d saline		

Preservative Stabilisers	0.09% sodium azide (NaN ₃) 1% bovine serum albumin				
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml				
Immunogen	Bovine lymphocytes				
External Database Links	UniProt: P98131 Related reagents				
	Entrez Gene: 281485 SELL Related reagents				
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with ce				

Spleen cells from immunised BALB/c mice were fused with cells of the NS1 myeloma cell line.

Specificity

Mouse anti Bovine CD62L antibody, clone CC32 recognizes bovine L-selectin, also known as CD62L, Leukocyte-endothelial cell adhesion molecule 1, LECAM-1 or Lymph node homing receptor.

Bovine CD62L is a 370 amino acid ~90 kDa, single pass type I transmembrane glycoprotein bearing a single <u>C-type lectin</u> domain, an <u>EGF-like</u> domain and two <u>Sushi</u> domains (<u>UniProt: P98131</u>). Immunoprecipitation of peripheral blood mononuclear cell lysates with Mouse anti Bovine CD62L antibody, clone CC32 reveals a molecule of ~90 kDa when run on polyacrylamide gels under reducing conditions, slightly larger than the murine and human CD62L homologues. Bovine CD62L is expressed on subpopulations of T-lymphocytes expressing CD2, CD4 and CD8. WC1 positive γ/δ T cells also express CD62L as do a subpopulation of WC3^{+Ve} B-lymphocytes and all peripheral blood monocytes (<u>Howard *et al.* 1992</u>).

Mouse anti Bovine CD62L antibody, clone CC32 has also been used successfully for the identification of CD62L on ovine peripheral blood cells by flow cytometry (<u>Halliday et al.</u> 2005).

Flow Cytometry

Use 10µl of the suggested working dilution to label 10⁶ cells in 100µl

References

- 1. Sopp, P. & Howard, C.J. (2001) IFN gamma and IL-4 production by CD4, CD8 and WC1 gamma delta TCR(+) T cells from cattle lymph nodes and blood. <u>Vet Immunol Immunopathol</u>. 81 (1-2): 85-96.
- 2. Riollet, C. *et al.* (2001) Cell subpopulations and cytokine expression in cow milk in response to chronic *Staphylococcus aureus* infection. <u>J Dairy Sci. 84: 1077-84.</u>
- 3. Vesosky, B. *et al.* (2003) Activation marker expression on bovine peripheral blood gammadelta T cells during post-natal development and following vaccination with a commercial polyvalent viral vaccine. Dev Comp Immunol. 27: 439-47.
- 4. Glew, E.J. *et al.* (2003) Differential effects of bovine viral diarrhoea virus on monocytes and dendritic cells. J Gen Virol. 84: 1771-80.

- 5. Halliday, S. *et al.* (2005) Expression of PrPC on cellular components of sheep blood. <u>J</u> Gen Virol. 86: 1571-9.
- 6. Brackenbury, L.S. *et al.* (2005) Identification of a cell population that produces alpha/beta interferon *in vitro* and *in vivo* in response to noncytopathic bovine viral diarrhea virus. J Virol. 79: 7738-44.
- 7. Edwards, J.C. *et al.* (2010) PrP^(Sc) is associated with B cells in the blood of scrapie-infected sheep. <u>Virology. 405: 110-9.</u>
- 8. Silvestre, F.T. *et al.* (2011) Effects of differential supplementation of fatty acids during the peripartum and breeding periods of Holstein cows: II. Neutrophil fatty acids and function, and acute phase proteins. <u>J Dairy Sci. 94: 2285-301.</u>
- 9. Ozawa, T. *et al.* (2011) Effect of intramammary infusion of rbGM-CSF on SCC and expression of polymorphonuclear neutrophil adhesion molecules in subclinical mastitis cows. Vet Res Commun. 36: 21-7.
- 10. Toka, F.N. *et al.* (2011) Rapid and Transient Activation of {gamma}{delta} T Cells to IFN-{gamma} Production, NK Cell-Like Killing, and Antigen Processing during Acute Virus Infection. J Immunol. 186: 4853-61.
- 11. Whelan, A.O. *et al.* (2011) Development of an Antibody to Bovine IL-2 Reveals Multifunctional CD4 T(EM) Cells in Cattle Naturally Infected with Bovine Tuberculosis. PLoS One. 6: e29194.
- 12. Vrieling M *et al.* (2012) γδ T cell homing to skin and migration to skin-draining lymph nodes is CCR7 independent. J Immunol. 188 (2): 578-84.
- 13. Blunt, L. *et al.* (2015) Phenotypic characterization of bovine memory cells responding to mycobacteria in IFNγ enzyme linked immunospot assays. <u>Vaccine</u>. 33 (51): 7276-82.
- 14. Hussen, J. *et al.* (2016) Neutrophil degranulation differentially modulates phenotype and function of bovine monocyte subsets. Innate Immun. 22 (2): 124-37.
- 15. Chen, X. *et al.* (2016) Bovine P-selectin mediates leukocyte adhesion and is highly polymorphic in dairy breeds. Res Vet Sci. 108: 85-92.
- 16. Jimbo, S. *et al.* (2017) Effect of *Mycoplasma bovis* on bovine neutrophils. <u>Vet Immunol Immunopathol. 188: 27-33.</u>
- 17. Hamilton, C.A. *et al.* (2017) Frequency and phenotype of natural killer cells and natural killer cell subsets in bovine lymphoid compartments and blood. <u>Immunology. 151</u> (1): 89-97.
- 18. Souza, F.N. *et al.* (2020) Immune response in nonspecific mastitis: What can it tell us? <u>J Dairy Sci. 103 (6): 5376-86.</u>
- 19. 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. <u>Biochem Biophys Res Commun. 553: 37-43.</u>
- 20. Martin, C.C. *et al.* (2021) Effect of prophylactic use of tulathromycin on gut bacterial populations, inflammatory profile and diarrhea in newborn Holstein calves. <u>Res Vet Sci.</u> 136: 268-76.
- 21. Hong, S. *et al.* (2024) Impact of an Injectable Trace Mineral Supplement on the Immune Response and Outcome of *Mannheimia haemolytica* Infection in Feedlot Cattle. Biol Trace Elem Res. Jun 10 [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.

Guarantee

12 months from date of despatch

Acknowledgements

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Health And Safety Information

Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA1649A647

10041

Regulatory

For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL: Alexa Fluor® 647 (MCA928A647)

America

North & South Tel: +1 800 265 7376 Fax: +1 919 878 3751 Worldwide

Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Europe

Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_us@bio-rad.com

Email: antibody_sales_uk@bio-rad.com

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 'M437886:250320'

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