

Datasheet: MCA1780A647

Description:	MOUSE ANTI DOG CD18:Alexa Fluor®647
Specificity:	CD18
Other names:	INTEGRIN BETA 2 CHAIN
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	CA1.4E9
Isotype:	IgG1
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 - 1/10

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	Dog								
Species Cross Reactivity	Reacts with: Horse, Pig, Human, Bovine, Cat, Mink, Hooded Seal Based on sequence similarity, is expected to react with: Mustelid N.B. Antibody reactivity and working conditions may vary between species.								
Product Form	Purified IgG conjugated to Alexa Fluor® 647 - liquid								
Max Ex/Em	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>Alexa Fluor®647</td> <td>650</td> <td>665</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	Alexa Fluor®647	650	665		
Fluorophore	Excitation Max (nm)	Emission Max (nm)							
Alexa Fluor®647	650	665							
Preparation	Purified IgG prepared by affinity chromatography on Protein G								
Buffer Solution	Phosphate buffered saline								
Preservative	0.09% Sodium Azide (NaN ₃)								
Stabilisers	1% Bovine Serum Albumin								
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml								
Specificity	Mouse anti Dog CD18 antibody, clone CA1.4E9 recognizes the canine CD18 cell surface antigen, also known as the b2 integrin.								

The tissue and cellular distribution of CD18 in canine tissue closely follows that observed for humans ([Moore et al. 1990](#)) CD18 is expressed by virtually all leucocytes, but more strongly upon monocytes and granulocytes than on lymphocytes. The cross reactivity patterns of Mouse anti Canine CD18, clone CA1.4E9 further indicate that the antibody clone recognizes an epitope common to a number of mammalian species.

Immunoprecipitation experiments using detergent lysates of iodinated peripheral blood leukocytes indicate that clone Ca1.4E9 immunoprecipitates the common 95 kDa beta 2 integrin chain (CD18) along with the non-covalently associated alpha chains at 180 kDa (CD11a), 165 kDa (CD11b) and 150 kDa (CD11c) ([Moore et al. 1990](#)). Of note is the lack of precipitation of the integrin alpha D chain (CD11d), this is likely due to the almost complete absence of CD11d expression on peripheral blood lymphocytes, in contrast to expression in the splenic red pulp ([Fry et al. 2003](#)).

High CD18 expression is a common feature of lymphoma and hyperplasia in dogs ([Caniatti et al. 1996](#))

Flow Cytometry

Use 10ul of the suggested working dilution to label 10⁶ cells or 100ul whole blood

References

1. Moore, P.F. *et al.* (1990) Canine leukocyte integrins: characterization of a CD18 homologue. [Tissue Antigens. 36 \(5\): 211-20.](#)
2. Danilenko, D.M. *et al.* (1992) Canine leukocyte cell adhesion molecules (leuCAMs): characterization of the CD11/CD18 family. [Tissue Antigens 40: 13-21.](#)
3. 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 \(1\): 1-13.](#)
4. Lecchi, C. *et al.* (2008) Bovine alpha-1 acid glycoprotein can reduce the chemotaxis of bovine monocytes and modulate CD18 expression. [Vet Res. 39: 50.](#)
5. Bauer, T.R. Jr. *et al.* (2006) Correction of the disease phenotype in canine leukocyte adhesion deficiency using ex vivo hematopoietic stem cell gene therapy. [Blood. 108: 3313-20.](#)
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7. McDonough, S.P. and Moore, P.F. (2000) Clinical, hematologic, and immunophenotypic characterization of canine large granular lymphocytosis [Vet Pathol. 37: 637-46.](#)
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9. Donahue, R.E. *et al.* (2011) Leukocyte integrin activation mediates transient neutropenia after G-CSF administration. [Blood. 118: 4209-14.](#)
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11. Comazzi, S. *et al.* (2006) Flow cytometric expression of common antigens CD18/CD45 in blood from dogs with lymphoid malignancies: a semi-quantitative study. [Vet Immunol Immunopathol. 112 \(3-4\): 243-52.](#)
12. Yeh, C.L. *et al.* (2006) Dietary arginine enhances adhesion molecule and T helper 2 cytokine expression in mice with gut-derived sepsis. [Shock. 25 \(2\): 155-60.](#)
13. Comazzi, S. *et al.* (2006) Flow cytometric patterns in blood from dogs with non-neoplastic and neoplastic hematologic diseases using double labeling for CD18 and CD45. [Vet Clin Pathol. 35 \(1\): 47-54.](#)
14. Moreira, M. L. *et al.* (2016) Vaccination against canine leishmaniasis increases the phagocytic activity, nitric oxide production and expression of cell activation/migration molecules in neutrophils and monocytes [Veterinary Parasitology. 15 Feb \[Epub ahead of print\]](#)

Further Reading 1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. [Vet Res. 39: 54.](#)

Storage Store at +4°C or at -20°C if preferred.
Storage in frost-free freezers is not recommended.
This product should be stored undiluted. This product is photosensitive and should be protected from light.
Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life 18 months from date of despatch.

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Health And Safety Information Material Safety Datasheet documentation #10041 available at:
10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA928A647\)](#)

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