

Datasheet: MCA5778A488

Description:	MOUSE ANTI BOVINE CD28:Alexa Fluor® 488
Specificity:	CD28
Format:	ALEXA FLUOR® 488
Product Type:	Monoclonal Antibody
Clone:	CC220
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

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		
Product Form	Purified IgG conjugated to Alexa Fluor 488 - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	Alexa Fluor®488	495	519
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 0.05 mg/ml		
Immunogen	Plasmid DNA encoding the bovine CD28 gene.		

External Database Links	UniProt: Q28071 Related reagents Entrez Gene: 281050 CD28 Related reagents
Fusion Partners	Spleen cells from immunized Balb/c mice were fused with cells of the SP2/0 myeloma cell line.
Specificity	Mouse anti Bovine CD28, clone CC220 recognizes the bovine homologue of human CD28, a co-stimulatory cell surface molecule expressed by T cell subsets. CD28 is the receptor for CD80 (B7.1) and CD86 (B7.2). Mouse anti Bovine CD28, clone CC220 is able to stimulate bovine T lymphocytes in combination with anti-bovine CD3 (Nishimori et al. 2017). For functional use, the use of the preservative free format (MCA5778EL) is recommended. Mouse anti Bovine CD28, clone CC220 has also been published under the alternative designation F849CD10 (Hogg et al. 2011 & Guzman et al. 2014).
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10 ⁶ cells in 100ul
References	1. Goto, S. <i>et al.</i> (2017) Increase of cells expressing PD-1 and PD-L1 and enhancement of IFN-γ production via PD-1/PD-L1 blockade in bovine mycoplasmosis. Immun Inflamm Dis. 5 (3): 355-363. 2. Nishimori, A. <i>et al.</i> (2017) <i>In vitro</i> and <i>in vivo</i> antiviral activity of an anti-programmed death-ligand 1 (PD-L1) rat-bovine chimeric antibody against bovine leukemia virus infection. PLoS One. 12 (4): e0174916. 3. Cunha, P. <i>et al.</i> (2019) Expansion, isolation and first characterization of bovine Th17 lymphocytes. Sci Rep. 9 (1): 16115.
Further Reading	1. Hogg, A.E. <i>et al.</i> (2011) Characterization of age-related changes in bovine CD8+ T-cells. Vet Immunol Immunopathol. 140 (1-2): 47-54.
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
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Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA5778A488
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Regulatory	For research purposes only
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Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M396024:220606'

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