Datasheet: MCA5778EL

Description:	MOUSE ANTI BOVINE CD28:Low Endotoxin
Specificity:	CD28
Format:	Low Endotoxin
Product Type:	Monoclonal Antibody
Clone:	CC220
Isotype:	IgG1
Quantity:	0.5 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	▪			
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	
Functional Assays	▪			5 - ug/ml

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	Bovine
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	None present
Carrier Free	Yes

Endotoxin Level	< 0.01 EU/ug
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Plasmid DNA encoding the bovine CD28 gene.
External Database Links	**UniProt:** Q28071 Related reagents **Entrez Gene:** 281050 CD28 Related reagents
RRID	AB_10965064
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. *et al.* (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. *et al.* (2017) *In vitro* and *in vivo* antivirus 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. *et al.* (2019) Expansion, isolation and first characterization of bovine Th17 lymphocytes. Sci Rep. 9 (1): 16115.
Further Reading	1. Hogg, A.E. *et al.* (2011) Characterization of age-related changes in bovine CD8+ T-cells. Vet Immunol Immunopathol. 140 (1-2): 47-54.
Storage	Store at -20°C only (ship +4°C)
Guarantee	12 months from date of despatch

Health And Safety Information	Material Safety Datasheet documentation #10162 available at: https://www.bio-rad-antibodies.com/SDS/MCA5778EL 10162
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos., 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
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC, HRP
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:Low Endotoxin (MCA928EL)

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

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