Datasheet: MCA2334A488

BATCH NUMBER 166701

Description:	MOUSE ANTI BOVINE TNF ALPHA:Alexa Fluor® 488
Specificity:	TNF ALPHA
Format:	ALEXA FLUOR® 488
Product Type:	Monoclonal Antibody
Clone:	CC327
Isotype:	IgG2b
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 (1)	▪			1/10 - 1/50

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.
(1) **Membrane permeabilization is required for this application. The use of Leucoperm (Product Code BUF09) is recommended for this purpose.**

Target Species

Bovine

Species Cross Reactivity

Reacts with: Fallow deer
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 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 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml
Immunogen	Recombinant bovine TNF alpha.
External Database Links	**UniProt:** Q06599 Related reagents **Entrez Gene:** 280943 TNF Related reagents
Synonyms	TNFA, TNFSF2
RRID	AB_567242
Specificity	**Mouse anti Bovine TNF alpha antibody, clone CC327** recognizes bovine TNF alpha, a 17.5 kDa cytokine, expressed by many different stimulated cell types including monocytes, macrophages, endothelial cells, fibroblasts and both T and B-lymphocytes. The production of TNF alpha is induced by a variety of factors, dependant upon cell type and includes bacterial toxins, IL-1, PDGF, IFN-beta, NGF, Oncostatin M and viral infections. The presence of TNF alpha is responsible for diverse immunomodulatory, anti-tumour and toxic effects and under certain conditions is also capable of self-stimulation and inhibition.
Flow Cytometry	Use 10ul of the suggested working dilution to label $1x10^6$ cells in 100ul.
References	1. Hope, J.C. *et al.* (2003) Maturation of bovine dendritic cells by lipopeptides. Vet Immunol Immunopathol. 95 (1-2): 21-31. 2. Whelan, A.O. *et al.* (2003) Modulation of the bovine delayed-type hypersensitivity responses to defined mycobacterial antigens by a synthetic bacterial lipopeptide. Infect Immun. 71 (11): 6420-5. 3. Guergnon J *et al.* (2003) A tumour necrosis factor alpha autocrine loop contributes to proliferation and nuclear factor-kappaβ activation of *Theileria parva*-transformed B cells. Cell Microbiol. 5 (10): 709-16. 4. Kwong, L.S. *et al.* (2010) Production and characterization of two monoclonal antibodies to bovine tumournecrosis factor alpha (TNF-alpha) and their cross-reactivity with ovine TNF-alpha. Vet Immunol Immunopathol. 135: 320-4. 5. Wenz, J.R. *et al.* (2010) Factors associated with concentrations of select cytokine and acute phase proteins in dairy cows with naturally occurring clinical mastitis. J Dairy Sci. 93: 2458-70. 6. Rinaldi, M. *et al* (2010) A sentinel function for teat tissues in dairy cows: dominant

innate immune response elements define early response to *E. coli* mastitis. Funct Integr Genomics. 10: 21-38.
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9. 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.
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13. Maggioli, M.F. *et al.* (2016) Increased TNF-α/IFN-γ/IL-2 and Decreased TNF-α/IFN-γ Production by Central Memory T Cells Are Associated with Protective Responses against Bovine Tuberculosis Following BCG Vaccination. Front Immunol. 7: 421.
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15. Camejo, M.I. *et al.* (2014) TNF-alpha in bulls experimentally infected with *Trypanosoma vivax*: a pilot study. Vet Immunol Immunopathol. 162 (3-4): 192-7.
16. Jolly A *et al.* (2016) Evidence of a pro-apoptotic effect of specific antibodies in a bovine macrophage model of infection with *Mycobacterium avium* subsp. paratuberculosis. Vet Immunol Immunopathol. 169: 47-53.
17. Rodrigues, V. *et al.* (2017) Development of a bead-based multiplexed assay for simultaneous quantification of five bovine cytokines by flow cytometry. Cytometry A. 91 (9): 901-7.
18. Sirak, A. *et al.* (2021) Cellular and Cytokine Responses in Lymph Node Granulomas of Bacillus Calmette Guérin (BCG)-Vaccinated and Non-vaccinated Cross-Breed Calves Naturally Infected With *Mycobacterium bovis*. Front Vet Sci. 8: 698800.

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. This product is photosensitive and should be protected from light.
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/MCA2334A488 10041
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG2b NEGATIVE CONTROL:Alexa Fluor® 488 (MCA691A488)

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

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