

Datasheet: MCA2334

BATCH NUMBER 166133

Description:	MOUSE ANTI BOVINE TNF ALPHA
Specificity:	TNF ALPHA
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	CC327
Isotype:	IgG2b
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 (1)	▪			
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA	▪			
Immunoprecipitation			▪	
Western Blotting			▪	

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	<p>Reacts with: Fallow deer</p> <p>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.</p>
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	0.09% Sodium Azide
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 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_2256048
Specificity	<p>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.</p> <p>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.</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10 ⁶ cells in 100ul.
ELISA	This reagent may be used as a capture antibody in a sandwich ELISA for bovine TNF alpha in combination with MCA2335B as detection reagent. PBP005 may be used as a standard.
References	<ol style="list-style-type: none">1. Hope, J.C. <i>et al.</i> (2003) Maturation of bovine dendritic cells by lipopeptides. Vet Immunol Immunopathol. 95 (1-2): 21-31.2. Whelan, A.O. <i>et al.</i> (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. Guernghon J <i>et al.</i> (2003) A tumour necrosis factor alpha autocrine loop contributes to proliferation and nuclear factor-kappaβ activation of <i>Theileria parva</i>-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.](#)
7. Sow, F.B. *et al.* (2011) Respiratory syncytial virus is associated with an inflammatory response in lungs and architectural remodeling of lung-draining lymph nodes of newborn lambs. [Am J Physiol Lung Cell Mol Physiol. 300 \(1\): L12-24.](#)
8. Simojoki, H. *et al.* (2011) Innate immune response in experimentally induced bovine intramammary infection with *Staphylococcus simulans* and *S. epidermidis*. [Vet Res. 42: 49.](#)
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.](#)
10. García-Jiménez, W.L. (2012) Histological and immunohistochemical characterisation of Mycobacterium bovis induced granulomas in naturally infected fallow deer (*Dama dama*). [Vet Immunol Immunopathol. 149: 66-75.](#)
11. Redondo, E. *et al.* (2014) Induction of interleukin-8 and interleukin-12 in neonatal ovine lung following experimental inoculation of bovine respiratory syncytial virus. [J Comp Pathol. 150 \(4\): 434-48.](#)
12. Luisa, C. *et al.* (2016) Evaluation of serum markers of blood redox homeostasis and inflammation in PCB naturally contaminated heifers undergoing decontamination [Science of The Total Environment. 542: 653-64.](#)
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.](#)
14. Rutigliano, H.M. *et al.* (2016) Trophoblast Major Histocompatibility Complex Class I Expression Is Associated with Immune-Mediated Rejection of Bovine Fetuses Produced by Cloning. [Biol Reprod. 95 \(2\): 39.](#)
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.

Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA2334 10040
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (STAR70...)	FITC
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Goat Anti Mouse IgG (STAR76...)	RPE
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
Rabbit Anti Mouse IgG (STAR13...)	HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC

Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL \(MCA691\)](#)

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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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)
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