

## Datasheet: MCA2334

<b>Description:</b>	MOUSE ANTI BOVINE TNF ALPHA
<b>Specificity:</b>	TNF ALPHA
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	CC327
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	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](http://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 permeabilisation is required for this application. Bio-Rad recommends the use of Leucoperm™ (Product Code [BUF09](#)) for this purpose.**

<b>Target Species</b>	Bovine
<b>Species Cross Reactivity</b>	Reacts with: Fallow deer <b>N.B.</b> Antibody reactivity and working conditions may vary between species.
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml

<b>Immunogen</b>	Recombinant bovine TNF alpha.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q06599</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">280943</a>    TNF    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	TNFA, TNFSF2
<b>Specificity</b>	<p><b>Mouse anti Bovine TNF alpha antibody, clone CC327</b> 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>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 1x10 <sup>6</sup> cells in 100ul.
<b>ELISA</b>	This reagent may be used as a capture antibody in a sandwich ELISA for bovine TNF alpha in combination with <a href="#">MCA2335B</a> as detection reagent. <a href="#">PBP005</a> may be used as a standard.
<b>References</b>	<ol style="list-style-type: none"> <li>Hope, J.C. <i>et al.</i> (2003) Maturation of bovine dendritic cells by lipopeptides. <a href="#">Vet Immunol Immunopathol. 95 (1-2): 21-31.</a></li> <li>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. <a href="#">Infect Immun. 71 (11): 6420-5.</a></li> <li>Guerignon J <i>et al.</i> (2003) A tumour necrosis factor alpha autocrine loop contributes to proliferation and nuclear factor-kappa<math>\beta</math> activation of <i>Theileria parva</i>-transformed B cells. <a href="#">Cell Microbiol. 5 (10): 709-16.</a></li> <li>Kwong, L.S. <i>et al.</i> (2010) Production and characterization of two monoclonal antibodies to bovine tumournecrosis factor alpha (TNF-alpha) and their cross-reactivity with ovine TNF-alpha. <a href="#">Vet Immunol Immunopathol. 135: 320-4.</a></li> <li>Wenz, J.R. <i>et al.</i> (2010) Factors associated with concentrations of select cytokine and acute phase proteins in dairy cows with naturally occurring clinical mastitis. <a href="#">J Dairy Sci. 93: 2458-70.</a></li> <li>Rinaldi, M. <i>et al</i> (2010) A sentinel function for teat tissues in dairy cows: dominant innate immune response elements define early response to <i>E. coli</i> mastitis. <a href="#">Funct Integr Genomics. 10: 21-38.</a></li> <li>Sow, F.B. <i>et al.</i> (2011) Respiratory syncytial virus is associated with an inflammatory response in lungs and architectural remodeling of lung-draining lymph nodes of newborn lambs. <a href="#">Am J Physiol Lung Cell Mol Physiol. 300 (1): L12-24.</a></li> <li>Simojoki, H. <i>et al.</i> (2011) Innate immune response in experimentally induced bovine intramammary infection with <i>Staphylococcus simulans</i> and <i>S. epidermidis</i>. <a href="#">Vet Res. 42: 49.</a></li> <li>Whelan, A.O. <i>et al.</i> (2011) Development of an Antibody to Bovine IL-2 Reveals Multifunctional CD4 T(EM) Cells in Cattle Naturally Infected with Bovine Tuberculosis. <a href="#">PLoS One. 6: e29194.</a></li> <li>García-Jiménez, W.L. (2012) Histological and immunohistochemical characterisation of Mycobacterium bovis induced granulomas in naturally infected fallow deer (<i>Dama dama</i>). <a href="#">Vet Immunol Immunopathol. 149: 66-75.</a></li> <li>Redondo, E. <i>et al.</i> (2014) Induction of interleukin-8 and interleukin-12 in neonatal ovine lung following experimental inoculation of bovine respiratory syncytial virus. <a href="#">J Comp Pathol. 150 (4): 434-48.</a></li> </ol>

12. Cigliano, L. *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- $\alpha$ /IFN- $\gamma$ /IL-2 and Decreased TNF- $\alpha$ /IFN- $\gamma$  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.](#)

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**Storage**

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

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**Shelf Life**

18 months from date of despatch.

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**Health And Safety Information**

Material Safety Datasheet documentation #10040 available at: 10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

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|---|---|
| Goat Anti Mouse IgG (STAR76...)         | <a href="#">RPE</a>   |
| Goat Anti Mouse IgG IgA IgM (STAR87...) | <a href="#">Alk. Phos.</a> , <a href="#">HRP</a>  |
| Goat Anti Mouse IgG (H/L) (STAR117...)  | <a href="#">Alk. Phos.</a> , <a href="#">DyLight®488</a> , <a href="#">DyLight®549</a> ,<br><a href="#">DyLight®649</a> , <a href="#">DyLight®680</a> , <a href="#">DyLight®800</a> ,<br><a href="#">FITC</a> , <a href="#">HRP</a> |
| Rabbit Anti Mouse IgG (STAR9...)        | <a href="#">FITC</a>  |
| Goat Anti Mouse IgG (STAR77...)         | <a href="#">HRP</a>   |
| Rabbit Anti Mouse IgG (STAR12...)       | <a href="#">RPE</a>   |
| Goat Anti Mouse IgG (Fc) (STAR120...)   | <a href="#">FITC</a> , <a href="#">HRP</a>  |
| Rabbit Anti Mouse IgG (STAR8...)        | <a href="#">DyLight®800</a>   |
| Goat Anti Mouse IgG (STAR70...)         | <a href="#">FITC</a>  |
| Rabbit Anti Mouse IgG (STAR13...)       | <a href="#">HRP</a>   |
| Human Anti Mouse IgG2b (HCA038...)      | <a href="#">FITC</a> , <a href="#">HRP</a>  |

### Recommended Negative Controls

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

'M315640:180503'

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