

Datasheet: MCA2112

BATCH NUMBER 164396

Description:	MOUSE ANTI BOVINE INTERFERON GAMMA
Specificity:	IFN GAMMA
Other names:	Immune interferon
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	CC330
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 (1)	▪			1/50 - 1/100
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA	▪			5µg/ml as capture antibody
Immunoprecipitation			▪	
Western Blotting			▪	
ELISpot	▪			

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.

(1) Membrane permeabilisation is required for this application. Bio-Rad recommends the use of Leucoperm (Product Code [BUF09](#)) for this purpose.

Target Species	Bovine
Species Cross Reactivity	<p>Reacts with: Sheep, Goat</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 (NaN ₃)
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Recombinant bovine IFN-gamma.
External Database Links	<p>UniProt: P07353 Related reagents</p> <p>Entrez Gene: 281237 IFNG Related reagents</p>
RRID	AB_2123456
Specificity	Mouse anti Bovine interferon γ antibody, clone CC330 recognizes bovine interferon gamma, also known as immune interferon. Interferon γ is a 143 amino acid ~20 kDa immunomodulatory cytokine secreted predominantly by T lymphocytes in response to infection by invading microorganisms. Interferon γ enhances cytotoxic activities of many cell types including macrophages, NK cells and T lymphocytes (Weiss et al. 2002).
Flow Cytometry	Use 10 μ l of the suggested working dilution to label 10 ⁶ cells or 100 μ l whole blood
ELISA	Mouse anti Bovine interferon- γ antibody, clone CC330 may be used as a capture reagent in a sandwich ELISA in combination with Mouse anti Bovine interferon- γ antibody, clone CC302 (MCA1783B) as a detection reagent and recombinant bovine interferon- γ (PBP007A) as a protein standard.
References	<ol style="list-style-type: none"> Mwangi, W. <i>et al.</i> (2002) DNA-encoded fetal liver tyrosine kinase 3 ligand and granulocyte macrophage-colony-stimulating factor increase dendritic cell recruitment to the inoculation site and enhance antigen-specific CD4+ T cell responses induced by DNA vaccination of outbred animals. J Immunol. 169 (7): 3837-46. Baszler, T.V. <i>et al.</i> (2008) Bovine immune response to inoculation with <i>Neospora caninum</i> surface antigen SRS2 lipopeptides mimics immune response to infection with live parasites. Clin Vaccine Immunol. 15: 659-67. Pascale, F. <i>et al.</i> (2008) Plasmacytoid dendritic cells migrate in afferent skin lymph. J Immunol. 180: 5963-72. Tourais-Esteves, I. <i>et al.</i> (2008) Neonatal goats display a stronger TH1-type cytokine

- response to TLR ligands than adults [Dev Comp Immunol. 32: 1231-41.](#)
5. Begg, D.J. *et al.* (2009) Enzyme-linked immunospot: an alternative method for the detection of interferon gamma in Johne's disease. [J Vet Diagn Invest. 21: 187-96.](#)
 6. Panadero, R. *et al.* (2009) Immunomodulatory effect of *Hypoderma lineatum* antigens: in vitro effect on bovine lymphocyte proliferation and cytokine production. [Parasite Immunol. 31: 72-7.](#)
 7. Elh mouzi-Younes, J. *et al.* (2009) Bovine neonate natural killer cells are fully functional and highly responsive to interleukin-15 and to NKp46 receptor stimulation. [Vet Res. 2009 40: 54.](#)
 8. Ferret-Bernard, S. *et al.* (2010) Cellular and molecular mechanisms underlying the strong neonatal IL-12 response of lamb mesenteric lymph node cells to R-848. [PLoS One. 5: e13705.](#)
 9. Contreras, V. *et al.* (2010) Existence of CD8 α -like dendritic cells with a conserved functional specialization and a common molecular signature in distant mammalian species. [J Immunol. 185: 3313-25.](#)
 10. Elh mouzi-Younes, J. *et al.* (2010) Ovine CD16+/CD14- blood lymphocytes present all the major characteristics of natural killer cells. [Vet Res. 41 \(1\): 4.](#)
 11. McLaughlin, K. *et al.* (2010) Hsp70 enhances presentation of FMDV antigen to bovine CD4+ T cells *in vitro*. [Vet Res. 41: 36.](#)
 12. Ferret-Bernard, S. *et al.* (2011) Mesenteric lymph node cells from neonates present a prominent IL-12 response to CpG oligodeoxynucleotide via an IL-15 feedback loop of amplification. [Vet Res. 42:19.](#)
 13. 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.](#)
 14. Skyberg, J.A. *et al.* (2011) Murine and bovine $\gamma\delta$ T cells enhance innate immunity against *Brucella abortus* infections. [PLoS One. 6:e21978.](#)
 15. Appana, G. *et al.* (2013) Antemortem and postmortem examinations of the cattle calf naturally infected with *Mycobacterium avium* subsp. *paratuberculosis*. [Eur J Microbiol and Immunol. 3: 241-51.](#)
 16. Verhelst, D. *et al.* (2014) Parasite distribution and associated immune response during the acute phase of *Toxoplasma gondii* infection in sheep. [BMC Vet Res. 10: 293.](#)
 17. Köhler H *et al.* (2015) Characterization of a caprine model for the subclinical initial phase of *Mycobacterium avium* subsp. *paratuberculosis* infection. [BMC Vet Res. 11 \(1\): 74.](#)
 18. Bergmann, A. *et al.* (2015) *In Vivo* Volatile Organic Compound Signatures of *Mycobacterium avium* subsp. *paratuberculosis*. [PLoS One. 10 \(4\): e0123980.](#)
 19. Cassidy-Cain, R.L. *et al.* (2017) Inhibition of Antigen-Specific and Nonspecific Stimulation of Bovine T and B Cells by Lymphostatin from Attaching and Effacing *Escherichia coli*. [Infect Immun. 85\(2\):e00845-16.](#)
 20. 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.](#)
 21. Villa-Mancera, A. *et al.* (2021) Phage display-based vaccine with cathepsin L and excretory-secretory products mimotopes of *Fasciola hepatica*. induces protective cellular and humoral immune responses in sheep. [Vet Parasitol. 289: 109340.](#)
 22. Risal de, M.Á. *et al.* (2017) Development and evaluation of an interferon gamma assay

for the diagnosis of tuberculosis in red deer experimentally infected with *Mycobacterium bovis*. [BMC Vet Res. 13 \(1\): 341.](#)

23. Ciliberti, M.G. *et al.* (2022) Green extraction of bioactive compounds from wine lees and their bio-responses on immune modulation using in vitro sheep model. [J Dairy Sci. 105 \(5\): 4335-53.](#)

24. Santillo, A. *et al.* (2022) Feeding tannins to dairy cows in different seasons improves the oxidative status of blood plasma and the antioxidant capacity of cheese. [J Dairy Sci. 105 \(11\): 8609-20.](#)

25. Bouroutzika, E. *et al.* (2023) Melatonin Administration to Pregnant Ewes for Coccidiosis Control in Their Offspring. [Animals \(Basel\). 13 \(14\): 2381.](#)

26. Tulu, B. *et al.* (2020) Cellular and Cytokine Responses in the Granulomas of Asymptomatic Cattle Naturally Infected with *Mycobacterium bovis* in Ethiopia. [Infect Immun. 88 \(12\): e00507-20.](#)

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/MCA2112>
10040

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

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

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

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Europe

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

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