

Datasheet: MCA2371

BATCH NUMBER 1605

Description:	MOUSE ANTI BOVINE INTERLEUKIN-4
Specificity:	IL-4
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	CC313
Isotype:	IgG2a
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	▪			2ug/ml - 5ug/ml
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. 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
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
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Recombinant bovine IL-4.
External Database Links	<p>UniProt: P30367 Related reagents</p> <p>Entrez Gene: 280824 IL4 Related reagents</p>
RRID	AB_2249178
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the SP2/0 myeloma cell line.
Specificity	<p>Mouse anti Bovine interleukin-4, clone CC313 is specific for bovine interleukin 4 (IL-4), also known as B-cell stimulatory factor 1. Bovine interleukin-4 is a 15 kDa, 135 amino acid peptide which is processed to a mature secreted form with the cleavage of a 24 amino acid, N-terminal signal peptide resulting in a 12.6 kDa active cytokine, the apparent MW may be altered by glycosylation (Heussler et al. 1992).</p> <p>IL-4 is expressed by a range of cells including T and B cells, macrophages and monocytes. It plays an important role in the regulation of bovine T and B cell responses.</p> <p>Mouse anti Bovine interleukin-4, clone CC313 has been used successfully as a coating antibody in a sandwich ELISA with biotinylated Mouse anti Bovine IL-4 antibody, clone CC314 (MCA2372B) as a detection reagent both with bovine (Stabel et al. 2011) and ovine samples (Olivier et al. 2012). Clones CC313 and CC314 have been used in the reverse configuration for the measurement of interleukin-4 in caprine samples (Marinero et al. 2012).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
ELISA	This reagent may be used as a capture antibody in sandwich ELISA assays for bovine IL-4 in combination with MCA2372B as a detection reagent, and recombinant bovine IL-4 (PBP006) as a standard.
References	<ol style="list-style-type: none"> Hope, J.C. <i>et al.</i> (2005) Development of detection methods for ruminant interleukin (IL)-4. J Immunol Methods. 301 (1-2): 114-23. Abbott, J.R. <i>et al.</i> (2005) Rapid and long-term disappearance of CD4+ T lymphocyte

- responses specific for *Anaplasma marginale* major surface protein-2 (MSP2) in MSP2 vaccinates following challenge with live *A. marginale*. [J Immunol. 174 \(11\): 6702-15.](#)
3. Sipka, A. *et al.* (2013) Prednisolone and cefapirin act synergistically in resolving experimental *Escherichia coli* mastitis [J Dairy Sci. 96: 4406-18.](#)
 4. Stabel, J.R. *et al.* (2013) Disparate Host Immunity to *Mycobacterium avium* subsp. paratuberculosis Antigens in Calves Inoculated with *M. avium* subsp. paratuberculosis, *M. avium* subsp. avium, *M. kansasii* and *M. bovis*. [Clin Vaccine Immunol. 20: 848-57.](#)
 5. Stabel, J.R. *et al.* (2011) Mediation of host immune responses after immunization of neonatal calves with a heat-killed *Mycobacterium avium* subsp. *paratuberculosis* vaccine. [Clin Vaccine Immunol. 18: 2079-89.](#)
 6. Dacal, V. *et al.* (2009) Local and systemic cytokine responses during larval penetration in cattle experimentally infested with *Hypoderma lineatum* (Diptera: Oestridae). [Vet Immunol Immunopathol. 131: 59-64.](#)
 7. Olivier, M. *et al.* (2012) Capacities of migrating CD1b+ lymph dendritic cells to present Salmonella antigens to naive T cells. [PLoS One. 7: e30430.](#)
 8. Marinaro, M. *et al.* (2012) Antigen-specific IFN-gamma and IL-4 production in caprine herpesvirus infected goats. [Res Vet Sci. 93: 662-7.](#)
 9. 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.](#)
 10. 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.](#)
 11. Cassady-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 \(2\): pii: e00845-16. \[Epub ahead of print\]](#)
 12. Liravi, B. *et al.* (2015) Dynamics of IL-4 and IL-13 expression in the airways of sheep following allergen challenge. [BMC Pulm Med. 15: 101.](#)

Storage	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
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/MCA2371 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](#)
Goat Anti Mouse IgG (STAR70...) [FITC](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)
Goat Anti Mouse IgG (STAR77...) [HRP](#)
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),
[FITC](#), [HRP](#)

North & South Tel: +1 800 265 7376

America 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

'M366734:200529'

Printed on 19 Mar 2025

© 2025 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)