

Datasheet: MCA2372B

Description:	MOUSE ANTI BOVINE INTERLEUKIN-4:Biotin
Specificity:	IL-4
Format:	Biotin
Product Type:	Monoclonal Antibody
Clone:	CC314
Isotype:	IgG2b
Quantity:	0.25 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
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA	▪			1ug/ml - 5ug/ml
Immunoprecipitation			▪	
Western Blotting			▪	

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.

Target Species

Bovine

Species Cross Reactivity

Reacts with: Goat, Sheep

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 biotin - liquid

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative	0.09% sodium azide (NaN ₃)
Stabilisers	1% bovine serum albumin
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_2127032
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the SP2/0 myeloma cell line.
Specificity	<p>Mouse anti Bovine interleukin-4 antibody, clone CC314 recognizes bovine interleukin-4 (IL-4), also known as B-cell stimulatory factor 1. 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. 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 CC314 has been used successfully as a detection antibody in a sandwich ELISA with Mouse anti Bovine IL-4 antibody, clone CC313 (MCA2371) as a coating 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 10µl of the suggested working dilution to label 1x10 ⁶ cells in 100µl
ELISA	Biotin conjugated Mouse anti Bovine interleukin-4 antibody, clone CC314 may be used as detection reagent in sandwich ELISA assays for bovine IL-4 with MCA2371 as capture 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 JR <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. Stabel JR *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 \(6\): 848-57.](#)
 4. 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.](#)
 5. Marinaro, M. *et al.* (2012) Antigen-specific IFN-gamma and IL-4 production in caprine herpesvirus infected goats. [Res Vet Sci. 93: 662-7.](#)
 6. Olivier, M. *et al.* (2012) Capacities of migrating CD1b+ lymph dendritic cells to present *Salmonella* antigens to naive T cells. [PLoS One. 7: e30430.](#)
 7. 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. \[Epub ahead of print\]](#)
 8. 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.](#)
 9. Stabel, J.R. *et al.* (2021) Comparative cellular immune responses in calves after infection with *Mycobacterium avium* subsp. *paratuberculosis*., *M. avium* subsp. *avium*., *M. kansasii*. and *M. bovis*.. [Vet Immunol Immunopathol. 237: 110268.](#)

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 #10041 available at: 10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Regulatory For research purposes only

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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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