

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 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	Reacts with: Goat, Sheep N.B. Antibody reactivity and working conditions may vary between species.
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
Stabilisers	1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Recombinant bovine IL-4.

**External Database
Links**

UniProt:

[P30367](#) [Related reagents](#)

Entrez Gene:

[280824](#) IL4 [Related reagents](#)

Fusion Partners

Spleen cells from immunised BALB/c mice were fused with cells of the SP2/0 myeloma cell line.

Specificity

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](#)).

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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 ([Marinaro et al. 2012](#)).

Flow Cytometry

Use 10ul of the suggested working dilution to label 1×10^6 cells in 100ul.

ELISA

This biotin conjugate 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

1. Hope, J.C. et al. (2005) Development of detection methods for ruminant interleukin (IL)-4. [J Immunol Methods. 301 \(1-2\): 114-23.](#)
2. Abbott JR et al. (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. 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 \(2\): pii: e00845-16. \[Epub ahead of print\]](#)

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.

Shelf Life 18 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>

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