# Datasheet: MCA1782EL

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| **Description:** | MOUSE ANTI BOVINE INTERLEUKIN-12/23:Low Endotoxin |
| **Specificity:** | IL-12 / IL-23 |
| **Format:** | Low Endotoxin |
| **Product Type:** | Monoclonal Antibody |
| **Clone:** | CC301 |
| **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 (1) | ▪ | | | 1/10 |
| Immunohistology - Frozen | | | ▪ | |
| Immunohistology - Paraffin | | | ▪ | |
| ELISA | ▪ | | | 8ug/ml |
| Immunoprecipitation | | | ▪ | |
| Western Blotting | ▪ | | | 1/50 - 1/100 |
| Functional Assays | ▪ | | | 1/100 |
| ELISpot | ▪ | | | |

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.

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

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| **Target Species** | Bovine |
| **Species Cross Reactivity** | Reacts with: Human, Sheep, African Buffalo<br>Does not react with:Mouse<br>**N.B.** Antibody reactivity and working conditions may vary between species. |
| **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** | None present |
| **Carrier Free** | Yes |

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| **Endotoxin Level** | <0.01 EU/ug |
| **Approx. Protein Concentrations** | IgG concentration 1.0 mg/ml |
| **Immunogen** | Recombinant bovine IL-12. |
| **External Database Links** | **UniProt:**<br>P54349 Related reagents<br>P46282 Related reagents<br><br>**Entrez Gene:**<br>281856 IL12A Related reagents<br>281857 IL12B Related reagents |
| **Fusion Partners** | Spleen cells from immunised BALB/c mice were fused with cells of the mouse SP2/0 myeloma cell line. |
| **Specificity** | **Mouse anti Bovine Interleukin-12/23 antibody, clone CC301** recognizes the p40 subunit of bovine interleukin-12, and binds to both the free subunit and the intact heterodimer. The p40 subunit is also known as IL-12B and can form a heterodimer with either IL-12A or IL-23A.<br><br>Mouse anti Bovine Interleukin-12/23 antibody, clone CC301 may be used as a capture antibody in an ELISA in combination with biotinylated Mouse anti Bovine Interleukin-12/23 antibody, clone CC326 (MCA2173B) as a detection reagent. |
| **Flow Cytometry** | Use 10ul of the suggested working dilution to label $10^6$ cells in 100ul. |
| **ELISA** | This antibody may be used as a capture antibody in a sandwich ELISA in combination with biotinylated clone CC326 (MCA2173B) as detection reagent, see Bannerman, D.D.*et al.* |
| **References** | 1. Hope, J.C. *et al.* (2002) Development of detection methods for ruminant interleukin (IL)-12. J Immunol Methods. 266 (1-2): 117-26.<br>2. Wenz, J.R. *et al.* (2010) Factors associated with concentrations of select cytokine and acute phase proteins in dairy cows with naturally occurring clinical mastitis. J Dairy Sci. 93: 2458-70.<br>3. Rinaldi, M. *et al* (2010) A sentinel function for teat tissues in dairy cows: dominant innate immune response elements define early response to *E. coli* mastitis. Funct Integr Genomics. 10: 21-38.<br>4. 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.<br>5. Contreras, V. *et al.* (2010) Existence of CD8α-like dendritic cells with a conserved functional specialization and a common molecular signature in distant mammalian species. J Immunol. 185: 3313-25.<br>6. Bannerman, D.D. *et al.* (2004) *Escherichia coli* and *Staphylococcus aureus* elicit differential innate immune responses following intramammary infection. Clin Diagn Lab Immunol. 11: 463-72.<br>7. Davis, T.L. and Pate, J.L. (2007) Bovine luteal cells stimulate proliferation of major histocompatibility nonrestricted gamma delta T cells. Biol Reprod. 77: 914-22.<br>8. Ferret-Bernard, S. (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.<br>9. Shoda, L.K. *et al.* (2001) DNA from protozoan parasites *Babesia bovis*, *Trypanosoma cruzi*, and |

*T. brucei* is mitogenic for B lymphocytes and stimulates macrophage expression of interleukin-12, tumor necrosis factor alpha, and nitric oxide. Infect Immun. 69: 2162-71.
10. Souza, M. *et al.* (2008) Pathogenesis and immune responses in gnotobiotic calves after infection with the genogroup II.4-HS66 strain of human norovirus. J Virol. 82: 1777-86.
11. 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.
12. Beechler BR *et al.* (2015) Enemies and turncoats: bovine tuberculosis exposes pathogenic potential of Rift Valley fever virus in a common host, African buffalo (*Syncerus caffer*). Proc Biol Sci. 282 (1805): .
13. Pomeroy B *et al.* (2015) Monocyte-derived dendritic cells from late gestation cows have an impaired ability to mature in response to *E. coli* stimulation in a receptor and cytokine-mediated fashion. Vet Immunol Immunopathol. 167 (1-2): 22-9.

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| **Storage** | Store at -20ºC only.<br><br>This product should be stored undiluted.<br><br>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. |
| **Shelf Life** | 18 months from date of despatch. |
| **Health And Safety Information** | Material Safety Datasheet documentation #10162 available at:<br>10162: https://www.bio-rad-antibodies.com/uploads/MSDS/10162.pdf |
| **Regulatory** | For research purposes only |

# Related Products

## Recommended Secondary Antibodies

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| Goat Anti Mouse IgG (STAR76...) | RPE |
| Goat Anti Mouse IgG IgA IgM (STAR87...) | Alk. Phos., HRP |
| Goat Anti Mouse IgG (H/L) (STAR117...) | Alk. Phos., DyLight®488, DyLight®549, DyLight®649, DyLight®680, DyLight®800, FITC, HRP |
| Rabbit Anti Mouse IgG (STAR9...) | FITC |
| Goat Anti Mouse IgG (STAR77...) | HRP |
| Rabbit Anti Mouse IgG (STAR12...) | RPE |
| Goat Anti Mouse IgG (Fc) (STAR120...) | FITC, HRP |
| Rabbit Anti Mouse IgG (STAR8...) | DyLight®800 |
| Goat Anti Mouse IgG (STAR70...) | FITC |
| Human Anti Mouse IgG2a (HCA037...) | FITC, HRP |
| Rabbit Anti Mouse IgG (STAR13...) | HRP |

## Recommended Negative Controls

MOUSE IgG2a NEGATIVE CONTROL:Low Endotoxin (MCA929EL)

**North & South America** Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com
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