

Datasheet: MCA2173Z BATCH NUMBER 159720

Description:	MOUSE ANTI BOVINE INTERLEUKIN-12/23:Preservative Free		
Specificity:	IL-12 / IL-23		
Format:	Preservative Free		
Product Type:	Monoclonal Antibody		
Clone:	CC326		
Isotype:	lgG2b		
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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry (1)	•			1/1000
Immunohistology - Frozen				
Immunohistology - Paraffin				
ELISA	-			1/100 - 1/1000
Immunoprecipitation				
Western Blotting				
Functional Assays	-			1/100

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<sup>™</sup> (Product Code <u>BUF09</u>) for this purpose.

Target Species	Bovine
Species Cross Reactivity	Reacts with: Sheep, Human  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 - 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				
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml				
Immunogen	Recombinant bovine IL-12.				
External Database Links	UniProt:  P46282 Related reagents  P54349 Related reagents  Entrez Gene:  281857 IL12B Related reagents  281856 IL12A Related reagents				
RRID	AB_323763				
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 CC326 recognizes the p40 subunit of bovine interleukin-12. The p40 subunit is also known as IL-12B and can form a heterodimer with either IL-12A or IL-23A. Mouse anti Bovine Interleukin-12/23 antibody, clone CC326 has been shown to block the biological activity of bovine IL-12.				
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells of 100ul.				
References	<ol> <li>Hope, J.C. <i>et al.</i> (2002) Development of detection methods for ruminant interleukin (IL)-12. <u>J Immunol Methods. 266 (1-2): 117-26.</u></li> <li>Wenz, J.R. <i>et al.</i> (2010) Factors associated with concentrations of select cytokine and acute phase proteins in dairy cows with naturally occurring clinical mastitis. <u>J Dairy Sci. 93: 2458-70.</u></li> <li>Rinaldi, M. <i>et al</i> (2010) A sentinel function for teat tissues in dairy cows: dominant innate immune response elements define early response to <i>E. coli</i> mastitis. <u>Funct Integr Genomics. 10: 21-38.</u></li> <li>Ferret-Bernard, S. <i>et al.</i> (2011) Mesenteric lymph node cells from neonates present a prominent IL-12 response to CpG oligodeoxynucleotide via an IL-15 feedback loop of amplification. <u>Vet Res. 42:19.</u></li> <li>Contreras, V. <i>et al.</i> (2010) Existence of CD8α-like dendritic cells with a conserved functional specialization and a common molecular signature in distant mammalian</li> </ol>				

species. J Immunol. 185: 3313-25.

- 6. Bannerman, D.D. *et al.* (2004) *Escherichia coli* and *Staphylococcus aureus* elicit differential innate immune responses following intramammary infection. <u>Clin Diagn Lab Immunol</u>. 11: 463-72.
- 7. 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. <u>PLoS One.</u> <u>5: e13705.</u>
- 8. Souza, M. *et al.* (2008) Pathogenesis and immune responses in gnotobiotic calves after infection with the genogroup II.4-HS66 strain of human norovirus. <u>J Virol. 82: 1777-86.</u>
- 9. Stephens, S.A. *et al.* (2003) Differences in cytokine synthesis by the sub-populations of dendritic cells from afferent lymph. Immunology. 110: 48-57.
- 10. 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.
- 11. Beechler, B.R. *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) pii: 20142942.
- 12. Rutigliano, H.M. *et al.* (2016) Trophoblast Major Histocompatibility Complex Class I Expression Is Associated with Immune-Mediated Rejection of Bovine Fetuses Produced by Cloning. <u>Biol Reprod. 95 (2): 39.</u>
- 13. Stabel, J.R. & Bannantine, J.P. (2021) Reduced tissue colonization of *Mycobacterium avium*. subsp. *paratuberculosis*. in neonatal calves vaccinated with a cocktail of recombinant proteins. <u>Vaccine</u>. <u>May 06 [Epub ahead of print]</u>.
- 14. Rodrigues, V. *et al.* (2017) Development of a bead-based multiplexed assay for simultaneous quantification of five bovine cytokines by flow cytometry. <u>Cytometry A. 91</u> (9): 901-7.
- 15. 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*.. <u>Vet Immunol Immunopathol. 237: 110268.</u>
- 16. Ciliberti, M.G. *et al.* (2020) Nexus Between Immune Responses and Oxidative Stress: The Role of Dietary Hydrolyzed Lignin in *ex vivo* Bovine Peripheral Blood Mononuclear Cell Response. Front Vet Sci. 7: 9.

#### Storage

Store at -20°C only.

This product should be stored undiluted.

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.

Guarantee	tee 12 months from date of despatch			
Health And Safety Information	Material Safety Datasheet documentation #10162 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2173Z">https://www.bio-rad-antibodies.com/SDS/MCA2173Z</a> 10162			
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

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

Rabbit Anti Mouse IgG (STAR13...) HRP

### **Recommended Negative Controls**

### MOUSE IgG2b NEGATIVE CONTROL: Preservative Free (MCA691XZ)

 North & South
 Tel: +1 800 265 7376
 Worldwide
 Tel: +44 (0)1865 852 700
 Europe
 Tel: +49 (0) 89 8090 95 21

 America
 Fax: +1 919 878 3751
 Fax: +44 (0)1865 852 739
 Fax: +49 (0) 89 8090 95 50

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M366287:200529'

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