Datasheet: MCA1658

Description:	MOUSE ANTI SHEEP INTERLEUKIN-1 BETA
Specificity:	IL-1 BETA
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	1D4
Isotype:	IgG1
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
Flow Cytometry (1)	▪			1/10
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA	▪			
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.

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

Target Species	Sheep
Species Cross Reactivity	Reacts with: Goat, Bovine, Horse **N.B.** Antibody reactivity and working conditions may vary between species.
Product Form	Purified IgG - liquid
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Recombinant ovine IL-1 Beta

External Database Links	**UniProt:** P21621 Related reagents **Entrez Gene:** 443539 IL-1B Related reagents
Specificity	**Mouse anti Sheep Interleukin-1 beta antibody, clone 1D4** recognizes ovine interleukin-1 beta, and shows no cross-reactivity with ovine IL-6, IL-8, TNF alpha or MCP-1. Mouse anti Sheep Interleukin-1 beta antibody, clone 1D4 demonstrates partial neutralizing activity of ovine IL-1 beta.
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10^6 cells in 100ul.
ELISA	Mouse anti Bovine interleukin-1 beta antibody, clone 1D4 may be used as a capture antibody in a bovine IL-1 beta sandwich ELISA together with Rabbit anti Bovine interleukin-1β antibody (AHP851B) as the detection reagent for evaluation of IL-1β levels in bovine samples together with recombinant Bovine interleukin-1β (PBP008) used as standards. Alternatively, Mouse anti Bovine interleukin-1 beta antibody, clone 1D4 can be used as a capture reagent together with Rabbit anti Ovine interleukin-1&beta antibody (AHP423) as a detection reagent for the evaluation of IL-1β levels in ovine, bovine or caprine samples, again utilizing recombinant bovine IL-1&beta (PBP008) as an internal standard.
References	1. Rothel, J.S. *et al.* (1997) Analysis of ovine IL-1 beta production *in vivo* and *in vitro* by enzyme immunoassay and immunohistochemistry. Vet Immunol Immunopathol. 57 (3-4): 267-78. 2. Martoriati, A. & Gérard, N. (2003) Interleukin-1 (IL-1) system gene expression in granulosa cells: kinetics during terminal preovulatory follicle maturation in the mare. Reprod Biol Endocrinol. 1: 42-51. 3. 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. 4. 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. 5. Bougarn, S. *et al.* (2010) Muramyl dipeptide synergizes with *Staphylococcus aureus* lipoteichoic acid to recruit neutrophils in the mammary gland and to stimulate mammary epithelial cells. Clin Vaccine Immunol. 17 (11): 1797-809. 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. 7. Simojoki, H. *et al.* (2011) Innate immune response in experimentally induced bovine intramammary infection with *Staphylococcus simulans* and *S. epidermidis.* Vet Res. 42: 49. 8. 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. 9. Karisnan K *et al.* (2015) Interleukin-1 Receptor Antagonist Protects against Lipopolysaccharide Induced Diaphragm Weakness in Preterm Lambs. PLoS One. 10 (4): e0124390. 10. Dernfalk, J. *et al.* (2007) The xMAP technique can be used for detection of the inflammatory cytokines IL-1beta, IL-6 and TNF-alpha in bovine samples. Vet Immunol Immunopathol. 118 (1-2): 40-9. 11. Leite, F. *et al.* (2005) Incubation of bovine PMNs with conditioned medium from BHV-1 infected peripheral blood mononuclear cells increases their susceptibility to *Mannheimia haemolytica* leukotoxin. Vet Immunol Immunopathol. 103 (3-4): 187-93. 12. Jacobsen, S. *et al.* (2007) The cytokine response of circulating peripheral blood mononuclear

cells is changed after intravenous injection of lipopolysaccharide in cattle. Vet J. 174 (1): 170-5.
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Storage	Store at +4^{o}C or at -20^{o}C if preferred. 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.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (H/L) (STAR117...)	FITC
Rabbit Anti Mouse IgG (STAR9...)	FITC
Rabbit Anti Mouse IgG (STAR12...)	RPE
Rabbit Anti Mouse IgG (STAR13...)	HRP

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA928)

North & South America Tel: +1 800 265 7376 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

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