

Datasheet: MCA2365GA

Description:	MOUSE ANTI BOVINE CD335
Specificity:	CD335
Other names:	NKp46
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	AKS1
Isotype:	IgG1
Quantity:	0.1 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	■			1/50 - 1/200
Immunohistology - Frozen			■	
Immunohistology - Paraffin			■	
ELISA			■	
Immunoprecipitation			■	
Western Blotting	■			
Immunofluorescence	■			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system to a concentration equivalent to their test reagent.

Target Species	Bovine
Species Cross Reactivity	Reacts with: American Bison 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 G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml

Immunogen	Fusion protein consisting of the extracellular region of bovine CD335.
External Database Links	UniProt: Q863H2 Related reagents Entrez Gene: 369024 NCR1 Related reagents
Fusion Partners	Spleen cells from immunised Balb/c mice were fused with cells of the NS-0 myeloma cell line.
Specificity	Mouse anti Bovine CD335 antibody, clone AKS1 recognizes bovine CD335, also known as NKp46 and Natural cytotoxicity triggering receptor 1. CD335 is a type I transmembrane protein, with two extracellular C2-type immunoglobulin-like domains, which functions as an activating receptor. CD335 is expressed by human natural killer cells (Sivori et al. 1997). The bovine homologue is expressed on bovine NK cells (Storset et al. 2004) and no expression of CD335 has been detected on B cells, T cells, monocytes or granulocytes. Clone AKS1 is reported to activate lysis of FcγR-expressing cell line P815, by IL-2 activated NKp46+ cells (Storset et al. 2004).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	1. Storset, A.K. <i>et al.</i> (2004) NKp46 defines a subset of bovine leukocytes with natural killer cell characteristics. Eur J Immunol. 34 (3): 669-76. 2. Kulberg, S. <i>et al.</i> (2004) Reference values for relative numbers of natural killer cells in cattle blood. Dev Comp Immunol. 28 (9): 941-8. 3. Van Rhijn, I. <i>et al.</i> (2007) Massive, sustained γδ T cell migration from the bovine skin <i>in vivo</i>. J Leukoc Biol. 81: 968-73. 4. Toka, F.N. <i>et al.</i> (2011) Rapid and Transient Activation of γδ T Cells to IFN-γ Production, NK Cell-Like Killing, and Antigen Processing during Acute Virus Infection. J Immunol. 186: 4853-61. 5. Bastos, R.G. <i>et al.</i> (2008) Bovine NK cells acquire cytotoxic activity and produce IFN-γ after stimulation by <i>Mycobacterium bovis</i> BCG- or <i>Babesia bovis</i>-exposed splenic dendritic cells. Vet Immunol Immunopathol. 124: 302-12. 6. Boysen P <i>et al.</i> (2006) Bovine CD2-/NKp46+ cells are fully functional natural killer cells with a high activation status. BMC Immunol. 7: 10. 7. Elhmouzi-Younes, J. <i>et al.</i> (2009) Bovine neonate natural killer cells are fully functional and highly responsive to interleukin-15 and to NKp46 receptor stimulation. Vet Res. 40: 54. 8. Elhmouzi-Younes, J. <i>et al.</i> (2010) Ovine CD16+/CD14- blood lymphocytes present all the major characteristics of natural killer cells. Vet Res. 41:4. 9. Hoek, A. <i>et al.</i> (2009) Subpopulations of bovine WC1(+) γδ T cells rather than CD4(+)CD25(high) Foxp3(+) T cells act as immune regulatory cells <i>ex vivo</i>. Vet Res. 40:6. 10. Zuerner, R.L. <i>et al.</i> (2011) A <i>Leptospira borgpetersenii</i> Serovar Hardjo Vaccine Induces a Th1 Response, Activates NK Cells, and Reduces Renal Colonization. Clin Vaccine Immunol. 18: 684-91. 11. Nelson, D.D. <i>et al.</i> (2010) CD8(+)/perforin(+)/WC1(-) γδT cells, not CD8(+) αβ T cells, infiltrate vasculitis lesions of American bison (<i>Bison bison</i>) with experimental sheep-associated malignant catarrhal fever. Vet Immunol Immunopathol. 136: 284-91. 12. Banos, G. <i>et al.</i> (2013) Identification of immune traits correlated with dairy cow health, reproduction and productivity. PLoS One. 8: e65766. 13. Ramstead, A.G. <i>et al.</i> (2015) Aging influences the response of T cells to stimulation by the ellagitannin, oenothin B. Int Immunopharmacol. 26 (2): 367-77. 14. Boysen, P. <i>et al.</i> (2008) Natural killer cells in lymph nodes of healthy calves express CD16 and

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Further Reading

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Storage

Store at +4°C or at -20°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 (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
Rabbit Anti Mouse IgG (STAR13...)	HRP
Human Anti Mouse IgG1 (HCA036...)	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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