

## Datasheet: MCA2365PE

**BATCH NUMBER 1511**

<b>Description:</b>	MOUSE ANTI BOVINE CD335:RPE
<b>Specificity:</b>	CD335
<b>Other names:</b>	NKp46
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	AKS1
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	100 TESTS

### 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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat

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. 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 conjugated to R. Phycoerythrin (RPE) - lyophilised

#### Reconstitution

Reconstitute with 1 ml distilled water

#### Preparation

Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant

#### Buffer Solution

Phosphate buffered saline

<b>Preservative</b>	0.09% Sodium Azide
<b>Stabilisers</b>	1% Bovine Serum Albumin 5% Sucrose
<b>Immunogen</b>	Fusion protein consisting of the extracellular region of bovine CD335.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q863H2</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">369024</a>    NCR1    <a href="#">Related reagents</a></p>
<b>Fusion Partners</b>	Spleen cells from immunised Balb/c mice were fused with cells of the NS-0 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Bovine CD335 antibody, clone AKS1</b> 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 (<a href="#">Sivori <i>et al.</i> 1997</a>). The bovine homologue is expressed on bovine NK cells (<a href="#">Storset <i>et al.</i> 2004</a>) and no expression of CD335 has been detected on B cells, T cells, monocytes or granulocytes.</p> <p>Clone AKS1 is reported to activate lysis of FcγR-expressing cell line P815, by IL-2 activated NKp46+ cells (<a href="#">Storset <i>et al.</i> 2004</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Storset, A.K. <i>et al.</i> (2004) NKp46 defines a subset of bovine leukocytes with natural killer cell characteristics. <a href="#">Eur J Immunol. 34 (3): 669-76.</a></li> <li>2. Kulberg, S. <i>et al.</i> (2004) Reference values for relative numbers of natural killer cells in cattle blood. <a href="#">Dev Comp Immunol. 28 (9): 941-8.</a></li> <li>3. Van Rhijn, I. <i>et al.</i> (2007) Massive, sustained γδ T cell migration from the bovine skin <i>in vivo</i>. <a href="#">J Leukoc Biol. 81: 968-73.</a></li> <li>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. <a href="#">J Immunol. 186: 4853-61.</a></li> <li>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. <a href="#">Vet Immunol Immunopathol. 124: 302-12.</a></li> <li>6. Boysen P <i>et al.</i> (2006) Bovine CD2-/NKp46+ cells are fully functional natural killer cells with a high activation status. <a href="#">BMC Immunol. 7: 10.</a></li> <li>7. Elh mouzi-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. <a href="#">Vet Res. 40: 54.</a></li> <li>8. Elh mouzi-Younes, J. <i>et al.</i> (2010) Ovine CD16+/CD14- blood lymphocytes present all the major characteristics of natural killer cells. <a href="#">Vet Res. 41:4.</a></li> <li>9. Hoek, A. <i>et al.</i> (2009) Subpopulations of bovine WC1(+) γδ T cells rather than</li> </ol>

- CD4(+)CD25(high) Foxp3(+) T cells act as immune regulatory cells *ex vivo*. [Vet Res. 40:6.](#)
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11. Nelson, D.D. *et al.* (2010) CD8(+)/perforin(+)/WC1(-)  $\gamma/\delta$ T cells, not CD8(+)  $\alpha/\beta$  T cells, infiltrate vasculitis lesions of American bison (*Bison bison*) with experimental sheep-associated malignant catarrhal fever. [Vet Immunol Immunopathol. 136: 284-91.](#)
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15. González-Cano, P. *et al.* (2014) Two functionally distinct myeloid dendritic cell subpopulations are present in bovine blood. [Dev Comp Immunol. 44 \(2\): 378-88.](#)
16. Di Palma, S. *et al.* (2012) Comparative spatiotemporal analysis of the intrathecal immune response in natural listeric rhombencephalitis of cattle and small ruminants. [Comp Immunol Microbiol Infect Dis. 35 \(5\): 429-41.](#)
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infected mammary gland tissue and show antimicrobial activity *in vitro*. [Comp Immunol, Microbiol Infect Dis. Aug 7 \[Epub ahead of print\]](#)

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#### Further Reading

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#### Storage

Prior to reconstitution store at +4°C.  
Following reconstitution store at +4°C.  
DO NOT FREEZE.  
This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

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#### Guarantee

12 months from date of reconstitution.

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#### Health And Safety Information

Material Safety Datasheet documentation available at:  
<https://www.bio-rad-antibodies.com/SDS/MCA2365PE>  
Material Safety Datasheet Documentation #10075 available at:  
<https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf>

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#### Regulatory

For research purposes only

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## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA928PE\)](#)

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