

Datasheet: MCA5972A488

**BATCH NUMBER 152841**

<b>Description:</b>	MOUSE ANTI PIG CD335:Alexa Fluor® 488
<b>Specificity:</b>	CD335
<b>Other names:</b>	NKp46
<b>Format:</b>	ALEXA FLUOR® 488
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	VIV-KM1
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	100 TESTS/1ml

## 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 - 1/10
Immunofluorescence			▪	

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.

<b>Target Species</b>	Pig		
<b>Product Form</b>	Purified IgG conjugated to Alexa Fluor® 488 - liquid		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	Alexa Fluor®488	495	519
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative</b>	0.09% Sodium Azide (NaN <sub>3</sub> )		
<b>Stabilisers</b>	1% Bovine Serum Albumin		

<b>Approx. Protein Concentrations</b>	IgG concentration 0.05 mg/ml
<b>Immunogen</b>	Fusion protein consisting of the extracellular region of porcine CD335
<b>Fusion Partners</b>	Spleen cells from immunised Balb/c mice were fused with cells of the SP2/0 myeloma cell line
<b>Specificity</b>	<p><b>Mouse anti Pig CD335 antibody, clone VIV-KM1</b> recognizes the porcine homologue of human CD335, also known as NKp46 and natural cytotoxicity triggering receptor 1 (NCR1), a member of the natural cytotoxicity receptor (NCR) family.</p> <p>CD335 is a type I transmembrane protein, with two extracellular C2-type immunoglobulin-like domains, which functions as an activating receptor and is involved in the control of viral infection and tumor development.</p> <p>Until recently little has been known about porcine and veterinary NK cells. CD335 is expressed by human natural killer cells (<a href="#">Sivori, S. et al.1997</a>) and the development of monoclonal antibodies to bovine CD335 (clone ASK1) (<a href="#">Storset et al. 2004</a>) and ovine CD335 (clone EC1.1) (<a href="#">Connelley et al.2011</a>) have enabled researchers to identify and better understand ruminant NK cells. Clone VIV-KM1 is the first monoclonal developed to specifically identify porcine CD335 and provides a reagent to facilitate a better understanding of the pig immune system and aid in the understanding of the role of NK cells in host pathogen defense. Studies using VIV-KM1 have shown that, within the pig, CD335 is not universally expressed by all NK cells and that expression of this marker on NK cells may be influenced by cytokine production (<a href="#">Mair et al. 2012</a>).</p> <p>In addition to clone VIV-KM1, clones AKS1, which recognizes CD335 (NKp46) in bovine and other ruminants, and EC1.1, which recognizes ovine and caprine CD335, are also available from Bio-Rad.</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. Forberg, H. <i>et al.</i> (2014) Early responses of natural killer cells in pigs experimentally infected with 2009 pandemic H1N1 influenza A virus. <a href="#">PLoS One. 9 (6): e100619.</a></li> <li>2. Mair, K.H. <i>et al.</i> (2013) Porcine CD8<math>\alpha</math>dim/-NKp46high NK cells are in a highly activated state. <a href="#">Vet Res. 44: 13.</a></li> <li>3. Mair, K.H. <i>et al.</i> (2012) NKp46 expression discriminates porcine NK cells with different functional properties. <a href="#">Eur J Immunol. 42 (5): 1261-71.</a></li> <li>4. Yang, G. <i>et al.</i> (2017) Characterizing porcine invariant natural killer T cells: A comparative study with NK cells and T cells. <a href="#">Dev Comp Immunol. 76: 343-51.</a></li> </ol>
<b>Further Reading</b>	<ol style="list-style-type: none"> <li>1. Connelley, T. <i>et al.</i> (2011) NKp46 defines ovine cells that have characteristics corresponding to NK cells. <a href="#">Vet Res. 42: 37.</a></li> <li>2. 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>3. Sivori, S. <i>et al.</i> (1997) p46, a novel natural killer cell-specific surface molecule that mediates cell activation. <a href="#">J Exp Med. 186 (7): 1129-36.</a></li> </ol>

<b>Storage</b>	<p>Store at +4°C or at -20°C if preferred.</p> <p>This product should be stored undiluted.</p> <p>Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.</p>
<b>Guarantee</b>	12 months from date of despatch
<b>Acknowledgements</b>	<p>This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or <a href="mailto:outlicensing@thermofisher.com">outlicensing@thermofisher.com</a></p>
<b>Health And Safety Information</b>	<p>Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA5972A488">https://www.bio-rad-antibodies.com/SDS/MCA5972A488</a></p> <p>10041</p>
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 488 \(MCA928A488\)](#)

### Recommended Useful Reagents

[MOUSE ANTI PIG CD3:RPE \(MCA5951PE\)](#)

[MOUSE ANTI PIG CD16:RPE \(MCA1971PE\)](#)

[MOUSE ANTI SHEEP CD335 \(MCA5933GA\)](#)

[MOUSE ANTI BOVINE CD335 \(MCA2365GA\)](#)

[MOUSE ANTI PIG CD27:RPE \(MCA5973PE\)](#)

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'M368548:200529'

Printed on 14 Sep 2023