

## Datasheet: MCA1266SBUV510

<b>Description:</b>	MOUSE ANTI MOUSE CD161 / NK1.1:StarBright UltraViolet 510
<b>Specificity:</b>	CD161 / NK1.1
<b>Format:</b>	StarBright UltraViolet 510
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	PK136
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	100 TESTS/0.5ml

### 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 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>	Mouse
<b>Species Cross Reactivity</b>	Does not react with:Rat, Human
<b>Product Form</b>	Purified IgG conjugated to StarBright UltraViolet 510 - liquid

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	StarBright UltraViolet 510	340	513

<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
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<b>Buffer Solution</b>	Phosphate buffered saline
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<b>Preservative</b>	0.09% sodium azide (NaN <sub>3</sub> )
<b>Stabilisers</b>	1% bovine serum albumin 0.1% Pluronic F68

0.1% PEG 3350  
0.05% Tween 20

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**Immunogen** Spleen and bone marrow cells from CE mice.

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**External Database Links**

**UniProt:**

[P27814](#)     [Related reagents](#)

[P27812](#)     [Related reagents](#)

**Entrez Gene:**

[17059](#)     Klrb1c     [Related reagents](#)

[80782](#)     Klrb1b     [Related reagents](#)

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**Synonyms** Ly55b, Ly55c, Nkrp1b, Nkrp1c

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**Fusion Partners** Spleen cells from immunized (C3H x BALB/c) F1 Hybrid were fused with cells of the Sp2/0 - Ag14 myeloma cell line.

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**Specificity** **Mouse anti Mouse CD161 / NK1.1 antibody, clone PK136** recognizes the mouse NK1.1 cell surface antigen, a cell surface glycoprotein encoded by members of the NKR-P1 gene family. The NK1.1 surface antigen is also known as CD161b/CD161c and Ly-55.

In the mouse the NKR-P1 family has three members, NKR-P1A, -B and -C, whilst in the human only one member has been identified. The human protein has received the designation CD161, and the mouse proteins have been referred to as CD161a, -b, -c etc.

Although previously thought to recognize only CD161c, recent data has shown that the PK136 antibody may also react with CD161b. CD161c expression itself is strain specific in mice, but recognition of CD161b by PK136 appears to be even more complex, as only some CD161b positive strains are labelled by the antibody. Engagement of CD161c has been reported to have activating function in NK cells, whilst engagement of CD161b is inhibitory.

Mouse anti Mouse NK1.1 Antigen antibody, clone PK136 is useful for the identification of NK cells in selected strains of mice (positive on C57BL, FVB/N and NZB, but negative on AKR and BALB/c) and is also expressed by rare subsets of T cells and monocytes. Mouse anti Mouse NK1.1 antibody, clone PK136 has also been used for *in vivo* depletion of NK cells ([Wang et al. 2022](#)) and *in vitro* activation of NK cells ([Kung and Miller 1995](#)).

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**Flow Cytometry** Use 5µl of the suggested working dilution to label 10<sup>6</sup> cells in 100µl. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.

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- References**
1. Koo, G.C. *et al.* (1986) The NK-1.1(-) mouse: a model to study differentiation of murine NK cells. [J Immunol. 137 \(12\): 3742-7.](#)
  2. Kung, S.K. & Miller RG (1995) The NK1.1 antigen in NK-mediated F1 antiparent killing *in vitro*. [J Immunol. 154 \(4\): 1624-33.](#)
  3. Wang, M. *et al.* (1998) Natural killer cell depletion fails to influence initial CD4 T cell

- commitment in vivo in exogenous antigen-stimulated cytokine and antibody responses. [J Immunol. 160 \(3\): 1098-105.](#)
4. Halin, C. *et al.* (2002) Enhancement of the antitumor activity of interleukin-12 by targeted delivery to neovasculature. [Nat Biotechnol. 20 \(3\): 264-9.](#)
  5. Carnemolla, B. *et al.* (2002) Enhancement of the antitumor properties of interleukin-2 by its targeted delivery to the tumor blood vessel extracellular matrix. [Blood. 99: 1659-65.](#)
  6. Svensson, L. *et al.* (2003) gammadelta T cells contribute to the systemic immunoglobulin E response and local B-cell reactivity in allergic eosinophilic airway inflammation. [Immunology. 108 \(1\): 98-108.](#)
  7. Ebbinghaus, C. *et al.* (2005) Engineered vascular-targeting antibody-interferon-gamma fusion protein for cancer therapy. [Int J Cancer. 116 \(2\): 304-13.](#)
  8. Joseph-Pietras, D. *et al.* (2006) Anti-tumoural activity of peripheral blood mononuclear cells against melanoma cells: discrepant in-vitro and in-vivo effects. [Melanoma Res. 16: 325-33.](#)
  9. Hazlett, L.D. *et al.* (2007) NKT cells are critical to initiate an inflammatory response after *Pseudomonas aeruginosa* ocular infection in susceptible mice. [J Immunol. 179 : 1138-46.](#)
  10. Sakai, T. *et al.* (2010) Inflammatory disease and cancer with a decrease in Kupffer cell numbers in Nucling-knockout mice. [Int J Cancer. 126: 1079-94.](#)
  11. Ekstrand-Hammarström, B. *et al.* (2011) Inhalation of alkylating mustard causes long-term T cell-dependent inflammation in airways and growth of connective tissue. [Toxicology. 280 \(3\): 88-97.](#)
  12. Khallouf, H. *et al.* (2012) 5-Fluorouracil and interferon- $\alpha$  immunochemotherapy enhances immunogenicity of murine pancreatic cancer through upregulation of NKG2D ligands and MHC class I. [J Immunother. 35 \(3\): 245-53.](#)
  13. Klezovich-Bénard M *et al.* (2012) Mechanisms of NK cell-macrophage *Bacillus anthracis* crosstalk: a balance between stimulation by spores and differential disruption by toxins. [PLoS Pathog. 8 \(1\): e1002481.](#)
  14. Gock, H. *et al.* (2014) Altered glycosylation in donor mice causes rejection of strain-matched skin and heart grafts. [Am J Transplant. 14 \(4\): 797-805.](#)
  15. Gustafsson, Å. *et al.* (2015) Differential cellular responses in healthy mice and in mice with established airway inflammation when exposed to hematite nanoparticles. [Toxicol Appl Pharmacol. 288 \(1\): 1-11.](#)
  16. Flavell, D.J. *et al.* (2019) The TLR3 Agonist Poly Inosinic:Cytidylic Acid Significantly Augments the Therapeutic Activity of an Anti-CD7 Immunotoxin for Human T-cell Leukaemia. [Biomedicines. 7 \(1\) Feb 16 \[Epub ahead of print\].](#)
  17. Miao, M. *et al.* (2021) Reevaluation of NOD/SCID Mice as NK Cell-Deficient Models. [Biomed Res Int. 2021: 8851986.](#)
  18. Li, L. & Li, M. (2023) Astrocyte-derived extracellular vesicles inhibit the abnormal activation of immune function in neonatal mice with hypoxic-ischemic brain damage by carrying miR-124-3p. [Neurol Res. 45 \(12\): 1079-90.](#)

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**Further Reading**

1. Arase, N. *et al.* (1997) Association with FcR $\gamma$  is essential for activation signal through NKR-P1 (CD161) in natural killer (NK) cells and NK1.1+ T cells. [J Exp Med. 186 \(12\): 1957-63.](#)

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**Storage**

Store at +4°C.

DO NOT FREEZE.  
This product should be stored undiluted.

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<b>Guarantee</b>	12 months from date of despatch
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<b>Acknowledgements</b>	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #20471 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1266SBUV510">https://www.bio-rad-antibodies.com/SDS/MCA1266SBUV510</a> 20471
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<b>Regulatory</b>	For research purposes only
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## Related Products

### Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)  
'M408838:221014'

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