

## Datasheet: MCA1266SBY605

Description:	MOUSE ANTI MOUSE CD161 / NK1.1:StarBright Yellow 605
Specificity:	CD161 / NK1.1
Format:	StarBright Yellow 605
Product Type:	Monoclonal Antibody
Clone:	PK136
Isotype:	lgG2a
Quantity:	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 <u>www.bio-rad-antibodies.com/protocols</u> .					
		Yes	No	Not Determined	Suggested Dilution	
	Flow Cytometry	-			Neat	
	Where this product han necessarily exclude its a guide only. It is reconsystem using appropr	s use in such p mmended that	rocedures the user t	s. Suggested working itrates the product for	g dilutions are given as	
Target Species	Mouse					
Species Cross Reactivity	Does not react with:Rat, Human					
Product Form	Purified IgG conjugated to StarBright Yellow 605 - liquid					
Max Ex/Em	Fluorophore	Excitation Max	k (nm) E	mission Max (nm)		
	StarBright Yellow 605	572		606		
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant					
Buffer Solution	Phosphate buffered sa	aline				
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Alb 0.1% Pluronic F68 0.1% PEG 3350					

0.05% Tween 20

Immunogen	Spleen and bone marrow cells from CE mice.			
External Database Links	UniProt:			
	P27814 Related reagents			
	P27812 Related reagents			
	Entrez Gene:			
	17059 Kirb1c Related reagents			
	80782 Klrb1b Related reagents			
Synonyms	Ly55b, Ly55c, Nkrp1b, Nkrp1c			
Fusion Partners	Spleen cells from immunized (C3H x BALB/c) FI Hybrid were fused with cells of the Sp2/0			
	- Ag14 myeloma cell line.			
Specificity	<b>Mouse anti Mouse CD161 / NK1.1 antibody, clone PK136</b> 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.			
	amily. The WKT I surface antigen is also known as CD to th/CD to to and Ly-33.			
	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 <i>in vivo</i> depletion of NK cells ( <u>Wang <i>et al.</i> 2022</u> ) and <i>in vitro</i> activation of NK cells ( <u>Kung and Miller 1995</u> ).			
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.			
References	<ol> <li>Koo, G.C. <i>et al.</i> (1986) The NK-1.1(-) mouse: a model to study differentiation of murine NK cells. J Immunol. 137 (12): 3742-7.</li> <li>Kung, S.K. &amp; Miller RG (1995) The NK1.1 antigen in NK-mediated F1 antiparent killing <i>in vitro</i>. J Immunol. 154 (4): 1624-33.</li> <li>Wang, M. <i>et al.</i> (1998) Natural killer cell depletion fails to influence initial CD4 T cell commitment in vivo in exogenous antigen-stimulated cytokine and antibody responses. J</li> </ol>			

#### Immunol. 160 (3): 1098-105.

4. Halin, C. *et al.* (2002) Enhancement of the antitumor activity of interleukin-12 by targeted delivery to neovasculature. <u>Nat Biotechnol. 20 (3): 264-9</u>.

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. <u>Blood. 99: 1659-65.</u>

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. <u>Immunology. 108 (1): 98-108.</u>

7. Ebbinghaus, C. *et al.* (2005) Engineered vascular-targeting antibody-interferon-gamma fusion protein for cancer therapy. <u>Int J Cancer. 116 (2): 304-13.</u>

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. <u>Melanoma Res. 16:</u> <u>325-33.</u>

9. Hazlett, L.D. *et al.* (2007) NKT cells are critical to initiate an inflammatory response after *Pseudomonas aeruginosa* ocular infection in susceptible mice. <u>J Immunol. 179 : 1138-46.</u>

10. Sakai, T. *et al.* (2010) Inflammatory disease and cancer with a decrease in Kupffer cell numbers in Nucling-knockout mice. <u>Int J Cancer. 126: 1079-94.</u>

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. <u>Toxicology. 280 (3): 88-97.</u>

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. <u>PLoS Pathog. 8 (1): e1002481.</u>

14. Gock, H. *et al.* (2014) Altered glycosylation in donor mice causes rejection of strainmatched skin and heart grafts. <u>Am J Transplant. 14 (4): 797-805.</u>

15. Gustafsson, Å. *et al.* (2015) Differential cellular responses in healthy mice and in mice with established airway inflammation when exposed to hematite nanoparticles. <u>Toxicol</u> <u>Appl Pharmacol. 288 (1): 1-11.</u>

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. <u>Biomed Res Int. 2021: 8851986.</u>

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. <u>Neurol Res. 45 (12): 1079-90.</u>

# Further Reading1. Arase, N. et al. (1997) Association with FcRgamma is essential for activation signal<br/>through NKR-P1 (CD161) in natural killer (NK) cells and NK1.1+ T cells. J Exp Med. 186<br/>(12): 1957-63.

Storage Store at +4°C. DO NOT FREEZE.

	This product should be stored undiluted.
Guarantee	12 months from date of despatch
Acknowledgements	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts
Health And Safety Information	Material Safety Datasheet documentation #20471 available at: https://www.bio-rad-antibodies.com/SDS/MCA1266SBY605 20471
Regulatory	For research purposes only

## **Related Products**

## **Recommended Useful Reagents**

### MOUSE SEROBLOCK FcR (BUF041A) MOUSE SEROBLOCK FcR (BUF041B)

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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 'M415867:230116'

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