

Datasheet: MCA1266SBB580

BATCH NUMBER 100007001

Description:	MOUSE ANTI MOUSE CD161 / NK1.1:StarBright Blue 580
Specificity:	CD161 / NK1.1
Format:	StarBright Blue 580
Product Type:	Monoclonal Antibody
Clone:	PK136
Isotype:	IgG2a
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 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.

Target Species	Mouse		
Species Cross Reactivity	Does not react with:Rat, Human		
Product Form	Purified IgG conjugated to StarBright Blue 580 - liquid		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	StarBright Blue 580	475	582
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃) 1% Bovine Serum Albumin 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](#)

Klrb1c

[Related reagents](#)

[80782](#)

Klrb1b

[Related reagents](#)

Synonyms Ly55b, Ly55c, Nkrp1b, Nkrp1c

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

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](#)).

Flow Cytometry Use 5ul of the suggested working dilution to label 10⁶ cells in 100ul. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.

References

1. 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.](#)
2. 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.](#)

3. Kung, S.K. *et al.* (1999) The NKR-P1B gene product is an inhibitory receptor on SJL/J NK cells. [J Immunol. 162 \(10\): 5876-87.](#)
4. Carlyle, J.R. *et al.* (1999) Mouse NKR-P1B, a novel NK1.1 antigen with inhibitory function. [J Immunol. 162 \(10\): 5917-23.](#)
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. Carpentier, A.F. *et al.* (1999) Oligodeoxynucleotides containing CpG motifs can induce rejection of a neuroblastoma in mice. [Cancer Res. 59: 5429-32.](#)
7. Sakai, T. *et al.* (2010) Inflammatory disease and cancer with a decrease in Kupffer cell numbers in Nuclng-knockout mice. [Int J Cancer. 126: 1079-94.](#)
8. 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.](#)
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. 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.](#)
11. 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.](#)
12. Khallouf, H. *et al.* (2012) 5-Fluorouracil and interferon- α immunochemotherapy enhances immunogenicity of murine pancreatic cancer through upregulation of NKG2D ligands and MHC class I. [J Immunother. 35 \(3\): 245-53.](#)
13. Ebbinghaus, C. *et al.* (2005) Engineered vascular-targeting antibody-interferon-gamma fusion protein for cancer therapy. [Int J Cancer. 116 \(2\): 304-13.](#)
14. 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.](#)
15. 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.](#)
16. Halin, C. *et al.* (2002) Enhancement of the antitumor activity of interleukin-12 by targeted delivery to neovasculature. [Nat Biotechnol. 20 \(3\): 264-9.](#)
17. 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.](#)
18. 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 \[Epub ahead of print\].](#)
19. Miao, M. *et al.* (2021) Reevaluation of NOD/SCID Mice as NK Cell-Deficient Models. [Biomed Res Int. 2021: 8851986.](#)

Storage	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted.
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Guarantee	12 months from date of despatch
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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/MCA1266SBB580>
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
'M407340:221007'

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