

Datasheet: MCA1427PE

BATCH NUMBER 150165

Description:	MOUSE ANTI RAT CD161:RPE
Specificity:	CD161
Other names:	NKR-P1A
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	10/78
Isotype:	IgG1
Quantity:	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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat - 1/10

Where this antibody 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 antibody for use in their own system using appropriate negative/positive controls.

Target Species	Rat		
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
Reconstitution	Reconstitute with 1 ml distilled water		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide		
Stabilisers	1% Bovine Serum Albumin		

5% Sucrose

Immunogen	Purified splenic NK cells from the LEW rat strain.
------------------	--

External Database Links	UniProt: P27471 Related reagents A4KWA1 Related reagents Entrez Gene: 362443 Klrb1a Related reagents 25192 Klrb1b Related reagents
--------------------------------	---

Synonyms	Nkrp1a, Nkrp1b
-----------------	----------------

RRID	AB_321597
-------------	-----------

Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse X63.Ag8653 myeloma cell line.
------------------------	--

Specificity	<p>Mouse anti Rat CD161 antibody, clone 10/78 recognizes the rat Killer cell lectin-like receptor subfamily B protein, also known as NKR-PI or CD161. CD161 is a 233 amino acid ~60 kDa type II single pass protein containing a single C-type lectin domain. CD161 is expressed on rat NK cells and T cell subpopulations. CD161 exists in 2 forms NKR-PIa and NKR-PIb, Mouse anti Rat CD161 antibody, clone 10/78 recognizes both forms of CD161 (Li et al. 2003). Clone 10/78 competes with another anti CD161 clone, 3.2.3 for binding to antigen.</p> <p>Mouse anti Rat CD161 antibody, clone 10/78 has been successfully employed for the <i>in vivo</i> depletion of rat NK cells in an experimental obesity model (Wrann et al. 2010).</p>
--------------------	---

Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
-----------------------	---

References	<ol style="list-style-type: none">1. Dyugovskaya, L. <i>et al.</i> (2003) Phenotypic profile and functional characterization of rat lymph node-derived gammadelta T cells: implication in the immune response to cytomegalovirus. Immunology. 108 (2): 129-36.2. Sedgwick, J.D. <i>et al.</i> (1998) Central nervous system microglial cell activation and proliferation follows direct interaction with tissue-infiltrating T cell blasts. J Immunol. 160 (11): 5320-30.3. Schwartzkopff, J. <i>et al.</i> (2010) NK cell depletion delays corneal allograft rejection in baby rats. Mol Vis. 16: 1928-35.4. Lyons, A. <i>et al.</i> (2011) Atorvastatin prevents age-related and amyloid-beta-induced microglial activation by blocking interferon-gamma release from natural killer cells in the brain. J Neuroinflammation. 8: 27.5. Ali, S. <i>et al.</i> (2005) Combined immunostimulation and conditional cytotoxic gene therapy provide long-term survival in a large glioma model. Cancer Res. 65: 7194-204.6. Banerjee, S. <i>et al.</i> (2003) Development of organised conjunctival leucocyte aggregates after corneal transplantation in rats. Br J Ophthalmol. 87: 1515-22.
-------------------	--

7. Latta, M. *et al.* (2007) CXCR6 is expressed on T cells in both T helper type 1 (Th1) inflammation and allergen-induced Th2 lung inflammation but is only a weak mediator of chemotaxis. [Immunology. 121: 555-64.](#)
8. Tliba, O. *et al.* (2002) Evaluation of the hepatic NK cell response during the early phase of *Fasciola hepatica* infection in rats. [Vet Res. 33 \(3\): 327-32.](#)
9. Blöcher, S. *et al.* (2007) Acute rejection of experimental lung allografts: characterization of intravascular mononuclear leukocytes. [Clin Immunol. 124 \(1\): 98-108.](#)
10. Koch, M. *et al.* (2015) Extracellular Vesicles from MSC Modulate the Immune Response to Renal Allografts in a MHC Disparate Rat Model. [Stem Cells Int. 2015: 486141.](#)
11. Trama, A.M. *et al.* (2012) Lymphocyte phenotypes in wild-caught rats suggest potential mechanisms underlying increased immune sensitivity in post-industrial environments. [Cell Mol Immunol. 9 \(2\): 163-74.](#)
12. Wrann, C.D. *et al.* (2010) Obesity and NK cells affect the expression of the long form of the leptin receptor Ob-Rb in liver of F344 rats. [Exp Toxicol Pathol. 62 \(1\): 1-8.](#)
13. Ikezumi, Y. *et al.* (2000) An anti-CD5 monoclonal antibody ameliorates proteinuria and glomerular lesions in rat mesangioproliferative glomerulonephritis. [Kidney Int. 58 \(1\): 100-14.](#)
14. Obara, H. *et al.* (2005) IFN-gamma, produced by NK cells that infiltrate liver allografts early after transplantation, links the innate and adaptive immune responses. [Am J Transplant. 5 \(9\): 2094-103.](#)
15. Beutel, G. *et al.* (2013) Effect of chronic elevated asymmetric dimethylarginine (ADMA) levels on granulopoiesis. [Ann Hematol. 92 \(4\): 505-8.](#)
16. Lee, J.S. *et al.* (2011) Immunomodulatory effect of mushrooms on cytotoxic activity and cytokine production of intestinal lamina propria leukocytes does not necessarily depend on β -glucan contents. [Food Chem. 126 \(4\): 1521-6.](#)
17. Williamson, L.L. *et al.* (2016) Got worms? Perinatal exposure to helminths prevents persistent immune sensitization and cognitive dysfunction induced by early-life infection. [Brain Behav Immun. 51: 14-28.](#)
18. Arndt, T. *et al.* (2014) Variable immune cell frequencies in peripheral blood of LEW.1AR1-iddm rats over time compared to other congenic LEW strains. [Clin Exp Immunol. 177 \(1\): 168-78.](#)
19. Kuper, C.F. *et al.* (2011) Oxazolone (OXA) is a respiratory allergen in Brown Norway rats. [Toxicology. 290 \(1\): 59-68.](#)
20. Arsenović-Ranin, N. *et al.* (2013) Ovarian hormone withdrawal in prepubertal developmental stage does not prevent thymic involution in rats. [Exp Biol Med \(Maywood\). 238 \(6\): 641-57.](#)
21. Djikić J *et al.* (2014) Age-associated changes in rat immune system: lessons learned from experimental autoimmune encephalomyelitis. [Exp Gerontol. 58: 179-97.](#)
22. Lemke, A. *et al.* (2015) Rat renal transplant model for mixed acute humoral and cellular rejection: Weak correlation of serum cytokines/chemokines with intragraft changes. [Transpl Immunol. 33 \(2\): 95-102.](#)
23. Bähr, I. *et al.* (2017) Diet-Induced Obesity Is Associated with an Impaired NK Cell Function and an Increased Colon Cancer Incidence. [J Nutr Metab. 2017: 4297025.](#)
24. Sun, C.K. *et al.* (2017) Melatonin treatment enhances therapeutic effects of exosomes against acute liver ischemia-reperfusion injury. [Am J Transl Res. 9 \(4\): 1543-60.](#)
25. Chang, J.C. *et al.* (2019) Early Immune Response to Acute Gastric Fluid Aspiration in

a Rat Model of Lung Transplantation. [Exp Clin Transplant. 17 \(1\): 84-92.](#)
26. Xing, Z. *et al.* (2021) Early Toll-like receptor 4 inhibition improves immune dysfunction in the hippocampus after hypoxic-ischemic brain damage [Int J Med Sci. 19 \(1\): 142-51.](#)

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.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #20487 available at: <https://www.bio-rad-antibodies.com/SDS/MCA1427PE>
20487

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA1209PE\)](#)

North & South America Tel: +1 800 265 7376
Fax: +1 919 878 3751
Email: antibody_sales_us@bio-rad.com

Worldwide Tel: +44 (0)1865 852 700
Fax: +44 (0)1865 852 739
Email: antibody_sales_uk@bio-rad.com

Europe Tel: +49 (0) 89 8090 95 21
Fax: +49 (0) 89 8090 95 50
Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M375324:210104'

Printed on 03 Feb 2025

© 2025 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)