

Technical Data Sheet

PE Mouse Anti-Rat CD161a

Product Information

Material Number:	555009
Alternate Name:	NKR-P1A
Size:	0.2 mg
Concentration:	0.2 mg/ml
Clone:	10/78
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The 10/78 antibody reacts with NKR-P1A, a 60-kDa homodimer expressed on all natural killer (NK) cells and a small subset of T lymphocytes. The 10/78 antibody competes with the previously described 3.2.3 antibody for binding to the antigen. NKR-P1A is a type-II integral membrane protein with an extracellular C-type lectin domain, which is an NK cell-activating receptor specific for tumor target cells. Many rat dendritic cells have been shown to express NKR-P1A, and a subpopulation of these cells has cytotoxic activity. NKR-P1A has also been detected at low levels on peripheral blood monocytes, and its expression is upregulated in IFN- γ -activated monocytes, specifically in a subpopulation of large monocytes with phagocytic capacity. Furthermore, activated peripheral blood neutrophils may express a low level of NKR-P1A. In the mouse and rat, three members of the *NKR-P1* gene family have been identified; but in the human gene family, a single *NKR-P1* homologue has been discovered and designated *Cd161*.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested
----------------	------------------

Suggested Companion Products

Catalog Number	Name	Size	Clone
550617	PE Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-31C

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/pharmingen/colors.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

- Bezouska K, Vlahas G, Horvath O, et al. Rat natural killer cell antigen, NKR-P1, related to C-type animal lectins is a carbohydrate-binding protein. *J Biol Chem.* 1994; 269(24):16945-16952.(Biology)
- Bezouska K, Yuen CT, O'Brien J, et al. Oligosaccharide ligands for NKR-P1 protein activate NK cells and cytotoxicity. *Nature.* 1994; 372(6502):150-157.(Biology)
- Chambers, W.H., Vujanovic, N.L., et al. Monoclonal antibody to a triggering structure expressed on rat natural killer cells and adherent lymphokine-activated killer cells. *J Exp Med.* 1989; 169:1373-1389.(Biology)
- Josien R, Heslan M, Souillou JP, Cuturi MC. Rat spleen dendritic cells express natural killer cell receptor protein 1 (NKR-P1) and have cytotoxic activity to select targets via a Ca²⁺-dependent mechanism. *J Exp Med.* 1997; 186(3):467-472.(Biology)
- Kraus E, Lambracht D, Wonigeit K, Hunig T. Negative regulation of rat natural killer cell activity by major histocompatibility complex class I recognition. *Eur J Immunol.* 1996; 26(11):2582-2586.(Clone-specific: Immunoprecipitation)
- Lanier LL. Natural killer cells: from no receptors to too many. *Immunity.* 1997; 6(4):371-378.(Biology)

BD Biosciences

www.bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit www.bdbiosciences.com/how_to_order/

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2007 BD



Ryan JC, Niemi EC, Nakamura MC, Seaman WE. NKR-P1A is a target-specific receptor that activates natural killer cell cytotoxicity. *J Exp Med.* 1995; 181(5):1911-1915.(Biology)

Scriba A, Grau V, Steiniger B. Phenotype of rat monocytes during acute kidney allograft rejection: increased expression of NKR-P1 and reduction of CD43. *Scand J Immunol.* 1998; 47(4):332-342.(Biology)

Scriba A, Schneider M, Grau V, van der Meide PH, Steiniger B. Rat monocytes up-regulate NKR-P1A and down-modulate CD4 and CD43 during activation in vivo: monocyte subpopulations in normal and IFN-gamma-treated rats. *J Leukoc Biol.* 1997; 62(6):741-752.(Biology)

Trinite B, Voisine C, Yagita H, Josien R. A subset of cytolytic dendritic cells in rat. *J Immunol.* 2000; 165(8):4202-4208.(Biology)

Webster GA, Bowles MJ, Karim MS, Wood RF, Pockley AG. Activation antigen expression on peripheral blood neutrophils following rat small bowel transplantation. NKR-P1 is a novel antigen preferentially expressed during allograft rejection. *Transplantation.* 1994; 58(6):707-712.(Biology)