

Anti-Mouse NK1.1 (CD161), Clone PK136, FITC



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Antibodies

Mouse monoclonal IgG2a antibody
against mouse NK1.1 (CD161),
FITC-conjugated

Catalog #60103FI	500 µg	0.5 mg/mL
#100-0465	100 µg	0.5 mg/mL
#100-0464	25 µg	0.5 mg/mL

Product Description

The PK136 antibody reacts with murine NK1.1 (CD161), an ~80 kDa homodimeric type 2 transmembrane glycoprotein and C-type lectin receptor expressed on NK cells, NK-T cells, and rare subsets of T cells and monocytes in select strains of mice. NK1.1 is encoded by the Klrb1b and Klrb1c genes, which specify CD161b and CD161c polypeptides, respectively. CD161b is expressed only by Swiss NIH and SJL mice, and CD161c by certain strains such as C57BL, FVB/N, and NZB (but not A, AKR, BALB/c, CBA/J, C3H, C57BR, C58, DBA/1, DBA/2, NOD, SJL, or 129). NK1.1 has functional roles in modulating several processes, including the activation and proliferation of NK cells, induction of interferon- γ production, and release of cytotoxic granules. Its expression on the cell surface is specifically upregulated by IL-12. For detection of NK cells in NK1.1- strains, Anti-Mouse CD49b Antibody, Clone DX5 (Catalog #60020) is recommended. DX5 recognizes CD49b (integrin $\alpha 2$), another commonly used NK cell marker.

Target Antigen Name:	NK1.1 (CD161)
Alternative Names:	CD161b, CD161c, Klrb1b, Klrb1c, Ly-55, Ly-59, NK-1.1, NKRP1, NKRP1a, NKRP1b
Gene ID:	17059
Species Reactivity:	Mouse (strain-specific)
Host Species:	(C3H x BALB/c) F1 hybrid
Clonality:	Monoclonal
Clone:	PK136
Isotype:	IgG2a, kappa
Immunogen:	NK-1+ cells from mouse spleen and bone marrow
Conjugate:	FITC (Fluorescein isothiocyanate)

Applications

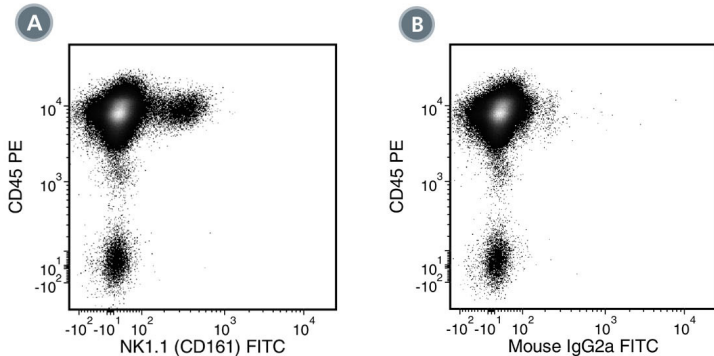
Verified:	FC
Reported:	FC, IF, IHC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated from NK1.1+ mouse strains such as C57BL/6, FVB/N, NZB, Swiss NIH, and SJL with EasySep™ kits, including EasySep™ Mouse NK Cell Isolation Kit (Catalog #19855).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered saline, pH 7.2, containing 0.09% sodium azide and 0.1% gelatin
Purification:	The antibody was purified by affinity chromatography and conjugated with FITC under optimal conditions. The solution is free of unconjugated FITC.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. Stable until expiry date (EXP) on label.
Directions for Use:	For flow cytometry, the suggested use of this antibody is $\leq 0.5 \mu\text{g}$ per 1×10^6 cells in 100 μL . It is recommended that the antibody be titrated for optimal performance for each application.

Data



(A) Flow cytometry analysis of C57BL/6 mouse splenocytes (gated on lymphocytes) labeled with Anti-Mouse NK1.1 (CD161) Antibody, Clone PK136, FITC and Anti-Mouse CD45 Antibody, Clone 30-F11, PE (Catalog #60030PE).

(B) Flow cytometry analysis of C57BL/6 mouse splenocytes (gated on lymphocytes) labeled with Mouse IgG2a, kappa Isotype Control Antibody, Clone MOPC-173, FITC (Catalog #60071FI) and Anti-Mouse CD45 Antibody, Clone 30-F11, PE.

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

1. Markman JL et al. (2020) Loss of testosterone impairs anti-tumor neutrophil function. *Nat Commun* 11(1): 1–15. (FC)
2. Kim J-I et al. (2018) CRISPR/Cas9-mediated knockout of Rag-2 causes systemic lymphopenia with hypoplastic lymphoid organs in FVB mice. *Lab Anim Res* 34(4): 166. (FC)
3. Seshadri S et al. (2017) Bacillus anthracis lethal toxin negatively modulates ILC3 function through perturbation of IL-23-mediated MAPK signaling. *PLoS Pathog* 13(10): 1–23. (FACS)
4. McAllister CS et al. (2013) TLR3, TRIF, and caspase 8 determine double-stranded RNA-induced epithelial cell death and survival in vivo. *J Immunol* 190(1): 418–27. (Depletion, IHC)
5. Mitchell AJ et al. (2012) Inflammasome-dependent IFN- γ drives pathogenesis in *Streptococcus pneumoniae* meningitis. *J Immunol* 189(10): 4970–80. (FC)
6. Xie X et al. (2010) MHC class I D(k) expression in hematopoietic and nonhematopoietic cells confers natural killer cell resistance to murine cytomegalovirus. *Proc Natl Acad Sci USA* 107(19): 8754–9. (Depletion, FA/Stimulation, FC)
7. Zandi S et al. (2008) EBF1 is essential for B-lineage priming and establishment of a transcription factor network in common lymphoid progenitors. *J Immunol* 181(5): 3364–72. (FC)
8. Kulesza J et al. (2006) NK cell depletion and recovery in SCID mice treated with anti-NK1.1 antibody. *Folia Histochem Cytobiol* 44(2): 93–6. (Depletion)
9. 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(5): 1659–65. (IHC)
10. Kitaichi N et al. (2002) Diminution of experimental autoimmune uveoretinitis (EAU) in mice depleted of NK cells. *J Leukoc Biol* 72(6): 1117–21. (Depletion)
11. Kanwar JR et al. (2001) Effects of survivin antagonists on growth of established tumors and B7-1 immunogene therapy. *J Natl Cancer Inst* 93(20): 1541–52. (Depletion, IHC, IF)
12. Carlyle JR et al. (1999) Mouse NKR-P1B, a novel NK1.1 antigen with inhibitory function. *J Immunol* 162(10): 5917–23. (FA, FC, IP)
13. Kung SK et al. (1999) The NKR-P1B gene product is an inhibitory receptor on SJL/J NK cells. *J Immunol* 162(10): 5876–87. (FA, FC, IP)
14. Reichlin A & Yokoyama WM. (1998) Natural killer cell proliferation induced by anti-NK1.1 and IL-2. *Immunol Cell Biol* 76(2): 143–52. (FA/Stimulation, FC)

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