

## Technical Data Sheet

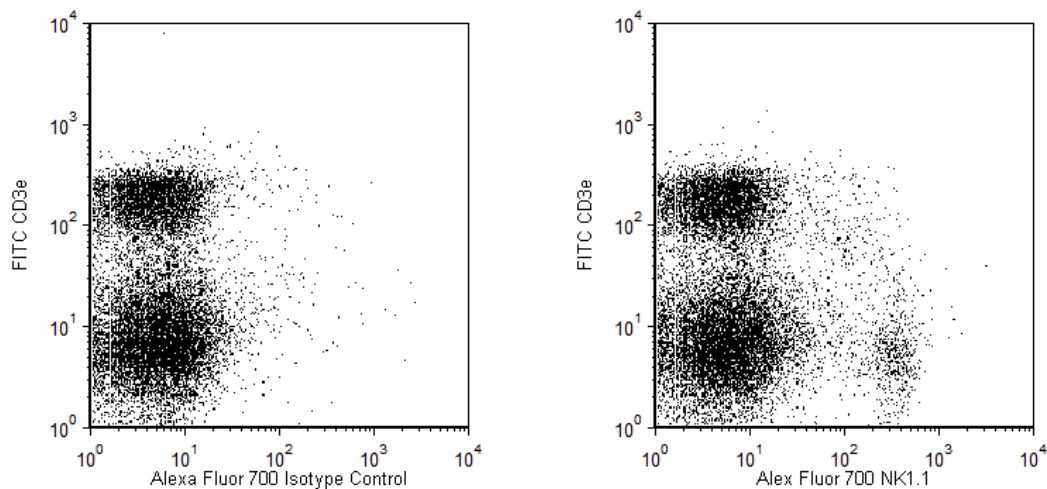
## Alexa Fluor® 700 Mouse Anti-Mouse NK1.1

## Product Information

<b>Material Number:</b>	<b>560515</b>
<b>Alternate Name:</b>	Klrb1b, CD161b, Nkrp1b; Klrb1c, CD161c, NK1.1, Nkrp1c
<b>Size:</b>	50 µg
<b>Concentration:</b>	0.2 mg/ml
<b>Clone:</b>	PK136
<b>Immunogen:</b>	Mouse NK-1+ Spleen and Bone Marrow Cells
<b>Isotype:</b>	Mouse (C3H x BALB/c) IgG2a, κ
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

## Description

In the mouse, at least three members of the *Klrb* (Killer cell lectin-like receptor, subfamily *b*; formerly *NKR-P1*) gene family have been identified (*Klrb1a/NKR-P1A*, *Klrb1b/NKR-P1B*, and *Klrb1c/NKR-P1C*); but in the human gene family, a single homologue has been designated *KLRB1*, *NKR-P1A*, or *CD161*. The KLRB1/NKR-P1 family of proteins are type-II-transmembrane C-type lectin receptors. KLRB1C/NKR-P1C activates NK-cell cytotoxicity, while KLRB1B/NKR-P1B functions as an inhibitory receptor. KLRB1B/NKR-P1B protein has intracellular Immunoreceptor Tyrosine-based Inhibitory Motif (ITIM), while KLRB1C/NKR-P1C lacks ITIM and activates via association with Fc Receptor γ chain. Strikingly, KLRB1B/NKR-P1B and KLRB1C/NKR-P1C share 96% amino acid sequence identity in their extracellular C-type lectin domains. The PK136 antibody reacts with the NK-1.1 surface antigen (CD161c) encoded by the *Klrb1c/NKR-P1C* gene expressed on natural killer (NK) cells in selected strains of mice (eg, C57BL, FVB/N, NZB, but not A, AKR, BALB/c, CBA/J, C3H, C57BR, C58, DBA/1, DBA/2, NOD, SJL, 129) and the CD161b antigen encoded by the *Klrb1b/NKR-P1B* gene expressed only on Swiss NIH and SJL mice, but not on C57BL/6. Expression of KLRB1C/NKR-P1C protein is correlated with the ability to lyse tumor cells in vitro and to mediate rejection of bone marrow allografts. The NK-1.1 marker is useful in defining NK cells; however, the antigen is also expressed on a rare, specialized population of T lymphocytes (NK-T cells) and some cultured monocytes. Plate-bound PK136 mAb, in combination with low concentrations of IL-2, induces proliferation of a subset of NK cells.



**Flow cytometric analysis of NK1.1 expression on mouse splenocytes.** Splenocytes from C57BL/6 mice were stained with FITC Hamster Anti-Mouse CD3e antibody (Cat. No. 553061) and either Alexa Fluor® 700 Mouse IgG2a, κ isotype control (Cat. No. 557880; left panel) or Alexa Fluor® 700 Mouse Anti-Mouse NK1.1 (Cat. No. 560515; right panel). Two-color dot plots were derived from gated events based on the forward and side light-scattering characteristics of viable splenocytes. Flow cytometry was performed on a BD FACSCanto™ system

## Preparation and Storage

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

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

The antibody was conjugated to Alexa Fluor® 700 under optimum conditions, and unreacted Alexa Fluor® 700 was removed.

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560515 Rev. 3



## Application Notes

### Application

Flow cytometry

Routinely Tested

### Suggested Companion Products

Catalog Number	Name	Size	Clone
557880	Alexa Fluor® 700 Mouse IgG2a, κ Isotype Control	0.1 mg	G155-178
553061	FITC Hamster Anti-Mouse CD3e	0.1 mg	145-2C11
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
554656	Stain Buffer (FBS)	500 mL	(none)
553142	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.5 mg	2.4G2
554657	Stain Buffer (BSA)	500 mL	(none)

### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. 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.
4. Alexa Fluor® 700 has an adsorption maximum of ~700nm and a peak fluorescence emission of ~720nm. Before staining cells with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
5. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
8. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.

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