

## Technical Data Sheet

## Biotin Mouse Anti-Mouse NK-1.1

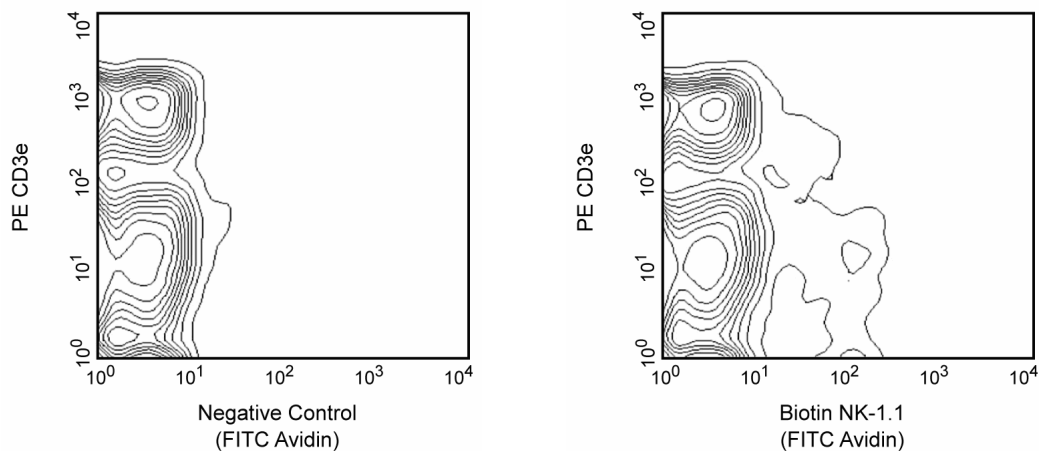
## Product Information

<b>Material Number:</b>	553163
<b>Alternate Name:</b>	NKR-P1B and NKR-P1C
<b>Size:</b>	0.5 mg
<b>Concentration:</b>	0.5 mg/ml
<b>Clone:</b>	PK136
<b>Immunogen:</b>	Mouse NK-1+ Spleen and Bone Marrow
<b>Isotype:</b>	Mouse (C3H x BALB/c) IgG2a, $\kappa$
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	Aqueous buffered solution containing $\leq 0.09\%$ 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  $\gamma$  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 Negative Control Purified NK-1.1 reacts with the NK-1.1 surface antigen 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 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.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



**Two-color analysis of NK-1.1 expression on splenocytes.** C57BL/6NHsd splenocytes were incubated simultaneously with PE-conjugated anti-mouse CD3e mAb 145-2C11 (Cat. No. 553063/553064) and biotinylated mAb PK136 (right panel), followed by Avidin-FITC (Cat. No. 554057). NK-1.1+ CD3e- NK cells and NK-1.1[dim] CD3e+ NK-T cells are detected. Flow cytometry was performed on a BD FACScan™ flow cytometry system.

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## Preparation and Storage

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

The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.

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

## Application Notes

### Application

Flow cytometry	Routinely Tested
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## Suggested Companion Products

Catalog Number	Name	Size	Clone
554057	Avidin FITC	0.5 mg	(none)
554061	PE Streptavidin	0.5 mg	(none)
553063	PE Hamster Anti-Mouse CD3e	0.1 mg	145-2C11
553455	Biotin Mouse IgG2a, κ Isotype Control	0.25 mg	G155-178

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [wwwbdbiosciences.com/pharmlingen/protocols](http://wwwbdbiosciences.com/pharmlingen/protocols) for technical protocols.
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.

## References

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