

## Technical Data Sheet

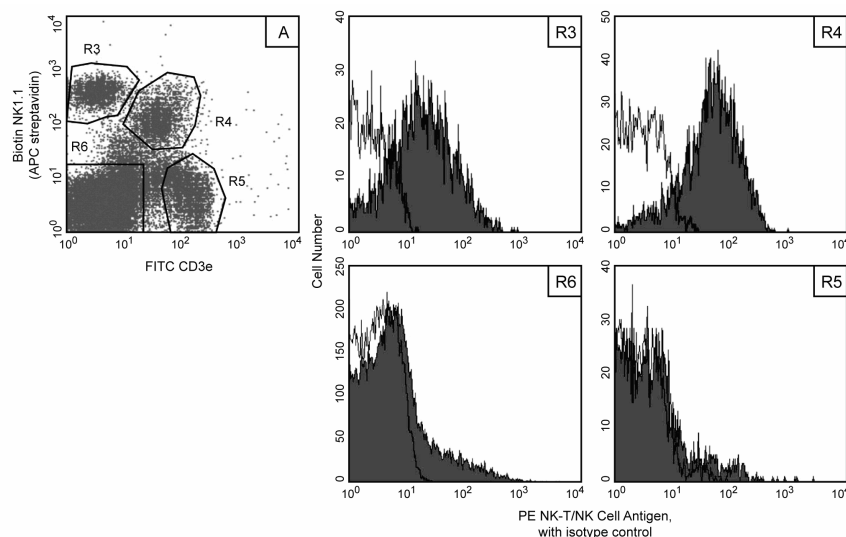
## PE Rat Anti-Mouse NK-T/NK Cell Antigen

## Product Information

Material Number:	550082
Alternate Name:	ICAM-1
Size:	0.2 mg
Concentration:	0.2 mg/ml
Clone:	U5A2-13
Immunogen:	BALB/c nu/nu mouse lymphoma line tMK-2U
Isotype:	Rat (F344) IgG2a, $\kappa$
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

## Description

The U5A2-13 mAb recognizes an antigen expressed on most-NKT cells and 55% of NK cells in the liver of various mouse strains, including both NK1.1+ (e.g., C57BL/6) and NK1.1- (e.g., BALB/c, C3H/He, MRL/lpr) strains. Abundant IL-4 and IFN- $\gamma$  are produced by U5A2-13 Ag+ TCR  $\alpha\beta$ + cells upon CD3 cross-linking, but not by U5A2-13 Ag- TCR  $\alpha\beta$ + cells in both NK1.1+ and NK1.1- strains. In C57BL/6 mice (NK1.1+ strain), 80% of U5A2-13 Ag+ T cells co-express the NK1.1 molecule. When staining hepatic mononuclear cells with U5A2-13 mAb, the fluorescence intensity detected on CD3- cells is lower than on CD3+ cells in BALB/c and C57BL/6 mice. Immunoprecipitation studies have shown that the U5A2-13 antigen comprises three proteins of 65 kDa, 34 kDa, and 31 kDa. **This antibody clone U5A2-13 was originally established for mouse NKT cells, but recent studies showed that it recognized a novel conformational epitope of ICAM-1.**



**Expression of the NK-T/NK Cell Antigen on mouse hepatic mononuclear cells.** C57BL/6 intrahepatic lymphocytes were stained with FITC-conjugated anti-mouse CD3e (Cat. No. 553061/553062), PE-conjugated U5A2-13, and biotinylated anti-mouse NK-1.1 (Cat. No. 553163) mAbs in the presence of Mouse Fc Block™ (Cat. No. 553141/553142), followed by Streptavidin-APC (Cat. No. 554067). The following four subpopulations of viable lymphocytes (Via-Probe™, Cat. No. 555816/555815) were selected for data analysis: NK1.1+ CD3-, NK1.1+ CD3+, NK1.1- CD3-, NK1.1- CD3+ (R3, R4, R6, and R5, respectively, in panel A). The expression of the NK-T/NK Cell Antigen is shown as filled histograms, with isotype control as empty histograms, in Panels R3, R4, R6, and R5 displaying the respective subpopulations. Flow cytometry was performed on a FACSCalibur™ (BDIS, San Jose, CA).

## 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

## Recommended Assay Procedure:

## BD Biosciences

bdbiosciences.com

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For optimal immunofluorescent staining, we recommend the use of Mouse Fc Block™ (anti-mouse CD16/CD32 2.4G2 mAb, Cat. No. 553141/553142).

### Suggested Companion Products

Catalog Number	Name	Size	Clone
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553061	FITC Hamster Anti-Mouse CD3e	0.1 mg	145-2C11
553163	Biotin Mouse Anti-Mouse NK-1.1	0.5 mg	PK136
554067	APC Streptavidin	0.1 mg	(none)
555816	Cell Viability Solution	100 tests	(none)

### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharminingen/protocols](http://www.bdbiosciences.com/pharminingen/protocols) for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/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

Kato K, Ikarashi Y, Sugahara T, Yasumoto A, Sancho D, Yoshida M, Takaue Y, Kobayashi Y, Sánchez-Madrid F, Wakasugi H.. U5A2-13, an antigen originally found on mouse NK-like T cells, is an early inducible cell surface antigen during lymphoid activation.. *Cell Immunol.* 2003; 221(1):27-36.(Clone-specific)

Maruoka H, Ikarashi Y, Shinohara K, et al. A novel monoclonal antibody permitting recognition of NKT cells in various mouse strains. *Biochem Biophys Res Commun.* 1998; 242(2):413-418.(Immunogen)

Shimizu A, Sasaki H, Aoyagi K, Yoshida M, Kato K, Heike Y, Ikarashi Y, Shirakawa K, Takaue Y, Miyajima A, Terada M, Nagai H, Wakasugi H.. The mouse natural killer T cell-associated antigen recognized by U5A2-13 monoclonal antibody is intercellular adhesion molecule-1.. *Immunol Lett.* 2004; 92(3):227-235. (Clone-specific)

Shinohara K, Ikarashi Y, Maruoka H, et al. Functional and phenotypical characteristics of hepatic NK-like T cells in NK1.1-positive and -negative mouse strains. *Eur J Immunol.* 1999; 29(6):1871-1878.(Biology)