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iF488 Anti-Mouse NK-1.1 Antibody

Catalog Number:	203807, 203808
Size:	25 μg, 100 μg
Target Name:	NK-1.1, CD161, NKR-P1C, NKR-P1B, Ly-55
Regulatory Status:	RUO

PRODUCT DETAILS

Clone:	PK136
Application:	Flow Cytometry
Reactivity:	Mouse
Format:	iF488
Isotype:	Mouse IgG2a
Antibody Type:	Monoclonal
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA
Protein Concentration:	Supplied at a lot-specific concentration.
Storage&Handling:	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Recommended Usage:	For flow cytometric staining, it is recommended to use less than 0.25 µg of this reagent per 0.5-1.0 million cells in a 100 µL volume. Optimal reagent performance should be determined by titration for each specific application. iF488 has an excitation max at 491 nm and an emission max at 516 nm.
Excitation Laser:	Blue Laser (488 nm)
Isotype Control:	301505

BACKGROUND INFORMATION

Mouse NK1.1 is a cell surface antigen commonly used as a marker for identifying natural killer (NK) cells in certain mouse strains, particularly C57BL/6. The NK1.1 antigen corresponds to **NKR-P1C (also called Klrb1c)**, a member of the C-type lectin-like receptor family expressed primarily on NK cells and a subset of T lymphocytes known as natural killer T (NKT) cells. NK1.1 plays an important role in innate immunity by contributing to the recognition and elimination of virus-infected cells and tumor cells.

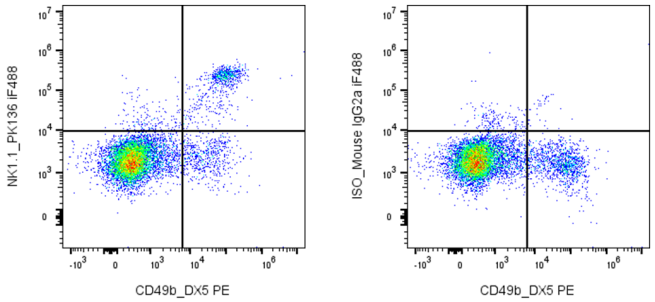
Structurally, NK1.1 is a type II transmembrane glycoprotein with an intracellular N-terminal region, a single transmembrane segment, and an extracellular C-type lectin-like domain responsible for ligand recognition. Unlike classical lectins, this domain typically recognizes protein ligands rather than carbohydrates. NK1.1 functions as an activating receptor, and engagement of the receptor can trigger signaling pathways that promote NK cell activation, cytokine production, and cytotoxic responses.

Known ligands for NK1.1 family receptors include molecules related to the **Clrb (C-type lectin-related) proteins**, such as Clr-b expressed on normal cells. These interactions help NK cells distinguish healthy cells from stressed or transformed cells. When

normal ligand expression is altered, NK cells may become activated and target the abnormal cells for destruction.

NK1.1-expressing cells are important in immune defense against infections and cancer, but excessive activation may contribute to inflammatory diseases or tissue damage. In experimental mouse models, antibodies against NK1.1 are widely used to identify or selectively deplete NK cells and NKT cells. This approach allows researchers to study the role of these cells in tumor immunity, viral infections, autoimmune diseases, and immunotherapy development.

PRODUCT DATA



Mouse splenocytes were stained with PE Anti-Mouse CD49b clone DX5 and iF488 Anti-Mouse NK1.1 clone PK136 (left) or an isotype control (right).

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