Revision 1

NCAM1 (CD56) (MY31) Mouse mAb (PE-Cy7® Conjugate)

#42804 Store at +4C

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP, FC-L	H	Endogenous	Mouse IgG1 kappa	#P13591	4684

Product Usage Information

Application	Dilution
Flow Cytometry (Fixed/Permeabilized)	1:20
Flow Cytometry (Live)	1:20

Storage

Supplied in 10 mM NaH_2PO_4, 150 mM NaCl, 0.09% NaN_3, 0.1% gelatin, pH7.2. This product is stable for 6 months when stored at 4ºC. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

NCAM1 (CD56) (MY31) Mouse mAb (PE-Cy7® Conjugate) recognizes endogenous levels of total NCAM1 (CD56) protein. This antibody detects an epitope within the extracellular domain.

Source / Purification

This monoclonal antibody was purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted dye removed from the preparation.

Description

This Cell Signaling Technology antibody is conjugated to PE-Cy7® and tested in-house for direct flow cytometric analysis in human cells.

Background

NCAM (neural cell adhesion molecule, CD56) is an adhesion glycoprotein with five extracellular immunoglobulin-like domains followed by two fibronectin type III repeats. Structural diversity is introduced by alternative splicing resulting in different cytoplasmic domains (1). NCAM mediates neuronal attachment, neurite extension, and cell-cell interactions through homo and heterophilic interactions. PSA (polysialic acid) post-translationally modifies NCAM and increases the metastatic potential of small cell lung carcinoma, Wilms' tumor, neuroblastoma, and rhabdomyosarcoma (2). CD56 is commonly used along with CD3 and CD16 to identify human natural killer (NK) cells (mouse NK cells do not express CD56) (3). Human NK cells are CD3-CD56+. The large subset with high CD16 expression are mature cytotoxic NK cells, while those with low CD16 expression are immature precursors and cytokine producers (4,5).

Background References

1. Cunningham, B. A. et al. (1987) *Science* 236, 799-806.
2. Seidenfaden, R. et al. (2003) *Mol. Cell. Biol.* 23, 5908-5918.
3. Hayakawa, Y. et al. (2006) *Immunol Rev* 214, 47-55.
4. Robertson, M.J. and Ritz, J. (1990) *Blood* 76, 2421-38.
5. Poli, A. et al. (2009) *Immunology* 126, 458-65.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized) **FC-L:** Flow Cytometry (Live)

Cross-Reactivity Key

H: Human

Trademarks and Patents

Limited Uses

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