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#3576

NCAM1 (CD56) (123C3) Mouse mAb

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP, IHC-P, IF-IC, FC-L	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 120 to 220	Source/Isotype: Mouse IgG1	UniProt ID: #P13591	Entrez-Gene Id: 4684
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Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunohistochemistry (Paraffin)
Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Live)

Dilution

1:1000
1:200
1:800
1:200 - 1:800
1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier-free (BSA and azide free) version of this product see product #97174.

Specificity/Sensitivity

NCAM (CD56) (123C3) Mouse mAb detects endogenous levels of total CD56 protein.

Source / Purification

Monoclonal antibody is produced by immunizing BALB/c mice with a membrane preparation of a small cell lung carcinoma specimen.

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).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-L:** Flow Cytometry (Live)

Cross-Reactivity Key

H: Human

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