MONOCLONAL ANTIBODY CD16

Cat. No.	Form	Quantity	Presentation
0813	Purified	0.2 mg	Freeze-dried
~~0814~~	~~FITC~~	~~100 tests~~	~~Liquid 2 ml~~
1238	Phycoerythrin	100 tests	Liquid 2 ml
1851	PE-Cy5	100 tests	Liquid 2 ml

Clone 3G8

Isotype IgG1 (mouse)

Immunogen Human neutrophils

Hybridoma Myeloma SP2/0 x Balb/c spleen cells

Specificity FcγRIII (CD16) is one of three antigenically, functionally, and biochemically distinct FcγR found on human leucocytes. FcγRIII is a low-avidity receptor that binds immune complexes, but not monomeric IgG.

This receptor exists in two different form; one is a transmembrane form (FCγRIIIA, 50-65 kDa)expressed on NK cells, monocytes and macrophages, and the other is a glycosylphosphatidylinositol anchored form (FcγRIIIB, 48 kDa) only expressed on neutrophils.

It has been shown that CD16 may be non covalently associated to CD3ζ chain on NK cells.NK cells can effect an antibody-dependent cytotoxicity (ADCC) mediated by FCγRIIIB.

3G8 antibody binds the FcγRIIIA as well as the FcγRIIIB.

Applications Studies of NK cells

Studies have shown that CD16 antibodies can be useful for the chronic myeloid leukemia typing.

Buffer Freeze-dried forms: 1 mg/ml bovine serum albumin in phosphate buffered saline.

Liquid forms: 2 mg/ml bovine serum albumin in phosphate buffered saline containing 0.1% sodium azide.

Reconstitution and Storage The freeze-dried form may be stored at 2-8°C until the expiration date. Reconstitute with 1 ml of distilled water. No preservative has been added. The reconstituted form may be stored at -20°C until the expiration date. Aliquotting is suggested to avoid multiple freeze-thaw cycles. The addition of sodium azide at 0.1% (w/v) is recommended for storage of the reconstituted form for up to one month at 2-8°C.

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The conjugated forms should not be frozen and should be stored in the dark at 2 - 8°C.

Recommended Procedures

Fluorescent microscopy or flow cytometry:
Liquid form: 20 µl/5x10^5 cells/test or 100 µl whole blood.
Freeze-dried: 0.2 to 2 µg/5x10^5 cells/test

Limitation : PE-Cy5 conjugates are recommended for use only on flow cytometers equiped with a 675 nm band pass filter in front of the third fluorescence detector

Immunohistochemistry:
Suggested form: freeze-dried
Working dilution: 1:25 to 1:50
This antibody is only suitable on frozen sections or cell smears.

References

1) Fleit, H.B., Kuhnle, M., Kobasiuk, C.D.,"Monoclonal antibodies to CD16 detect antigenic differences in FCgRIII on neutrophils and natural killer cells", 1987, in Leucocyte Typing III, McMichael, A.J., Editor, pp579-581.

2) Manara, G.C.,Ferrari, C., Pagani, L., Sansoni, P., Bologna, G., Molinari, A., Torresandi, C., De Panfilis, G.,"Morphometric evaluation of CD16-positive cells with respect to CD2 antigen coexpression",1990, Cellular Immunology, **128**, 118-129.

3) Warren, H.S., Skipsey, L.J.,"Phenotypic analysis of a resting subpopulation of human peripheral blood NK cells: the FcγRIII (CD16) molecule and NK cell differentiation", 1991, Immunology, **72**, 150-157.

4) Wahl,S.M., Allen, J.B., Welch, G.R., Wong, H.L.,"Transforming growth factor-b in synovial fluids modulates FcγRIII (CD16) expression on mononuclear phagocytes", 1992, J Immunol, **148** (2), 485-490.