

MONOCLONAL ANTIBODY Cytotoxic Effector p38

Cat. No.	Form	Quantity	Presentation
1607	Purified	0.2 mg	Freeze-dried
1608	Phycoerythrin	100 tests	Liquid 2ml
1609	PE-Cy5	100 tests	Liquid 2 ml

Clone	C1.7.1
Isotype	IgG1 K (mouse).
Immunogen	Cultured human NK-cells.
Hybridoma	Myeloma PX63.Ag8.653 x Balb/c spleen cells.
Specificity	<p>The C1.7 monoclonal antibody recognizes a 38 kDa novel cell surface signal transduction molecule (p38) found on all human NK-cells. It induces a granule-independent killing mechanism by NK effector cells. It is also found on γ/δ TCR T-cells and approximately half of peripheral α/β TCR CD8⁺ T-cells. It is not found on B-, CD4⁺ T-, or naive CD8⁻ T-cells.</p> <p>Upon activation, most CD8⁺ T-cells become C1.7 positive. However, a small but significant minority of CD8⁺ T-cells remain C1.7 negative. This subset is associated with lower cytotoxic activity, lower γ IFN production and higher IL4/IL10 production. Therefore, this mAb may be useful in defining subsets of CD8⁺ T-cells and investigating a novel cytotoxic mechanism on NK-cells.</p>
Applications	<p>Flow cytometry or fluorescent microscopy</p> <p>This antibody can be used as NK marker in the CD3⁻ population and as marker of cytotoxic effector cells in the CD3⁺ CD8⁺ population.</p> <p>Cell-mediated cytotoxicity Assays</p>
Buffer	<p>Freeze dried form: 1 mg/ml bovine serum albumin in phosphate buffered saline.</p> <p>Liquid form: 2 mg/ml bovine serum albumin in phosphate buffered saline containing 0.1% sodium azide.</p>

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Conjugates

Phycoerythrin: R-Phycoerythrin conjugated (1 mole of phycoerythrin/mole of IgG)
Excitation wavelength : 488 nm, maximum emission wavelength : 575 nm
Main emission color : orange-red

PE-Cy5. The IgG is conjugated to a tandem dye, constituted of R-Phycoerythrin covalently linked to Cyanine 5.

Excitation wavelength : 488 nm, maximum emission wavelength : 670 nm.
Main emission color: deep-red

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

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. Aliquoting is suggested to avoid multiple freeze-thaw cycles of the reagent. 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.

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 antibody/5x10⁵ cells/test or 100 µl whole blood.

Freeze-dried: 2 µg antibody/5x10⁵ cells/test or 100 µl whole blood.

Cell-mediated cytotoxicity assays:

In antibody-redirected lysis assays, FcγR⁺ P815X2 cells were used as targets and tests were performed in microtiter plates (10⁴ cells/well). 0.1 µg/ml of mAb C1.7 was used for induced NK cell-mediated cytotoxicity (1).

References

1) Valiante, N.M., and Trinchieri, G. "Identification of a novel signal transduction surface molecule on human cytotoxic lymphocytes", 1993, J. Exp. Med., **178**, 1397-1406.