Technical Data Sheet

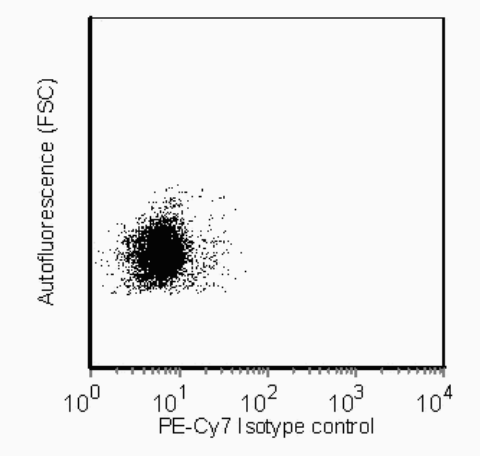
PE-Cy™7 Rat Anti-Human IL-2

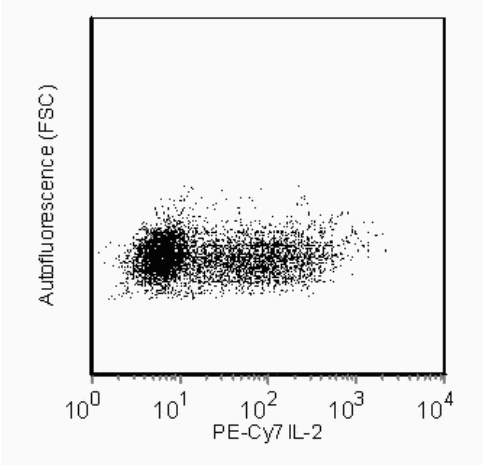
Product Information

Material Number:	**560707**
Size:	50 tests
Vol. per Test:	5 µl
Clone:	MQ1-17H12
Immunogen:	Human IL-2 Recombinant Protein
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The MQ1-17H12 antibody reacts with human interleukin-2 (IL-2). The immunogen used to generate the MQ1-17H12 hybridoma was recombinant human IL-2. Unconjugated or purified forms of this antibody have been reported to be neutralizing for human IL-2 bioactivity.





Flow cytometric analysis for IL-2 in stimulated human peripheral blood mononuclear cells (PBMC). *Human PBMC were stimulated for 6 hours with 50 ng/mL PMA (Sigma-Aldrich Cat. No. P-8139) and 500 ng/mL calcium ionophore A23187 (Sigma-Aldrich Cat. No. C-9275) in the presence of BD GolgiStop™ (Cat. No. 554724). Cells were then fixed and permeabilized using BD Cytofix/Cytoperm™ (Cat. No. 554714) followed by staining with either a PE-Cy™7 Rat IgG2a, κ isotype control (left panel) or with the PE-Cy™7 Rat Anti-Human IL-2 antibody (Cat. No. 560707, right panel). Dot plots were derived from gated events based on light scattering characteristics for lymphocytes. Flow cytometry was performed on a BD™ LSR II flow cytometry system.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with PE-Cy7 under optimum conditions, and unconjugated antibody and free PE-Cy7 were removed.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

Recommended Assay Procedure:

Flow cytometry: The MQ1-17H12 antibody is useful for immunofluorescent staining and flow cytometric analysis to identify and enumerate IL-2 producing cells within mixed cell populations. A useful control investigators may consider using for demonstrating specificity of staining, is to pre-block with one of the following reagents: (1) recombinant human IL-2 (Cat. No. 554603) or (2) unlabeled MQ1-17H12 antibody (Cat. No. 554563), prior to staining.

Suggested Companion Products

Catalog Number	Name	Size	Clone
557855	PE-Cy™7 Rat IgG2a, κ Isotype Control	100 tests	R35-95
552784	PE-Cy™7 Rat IgG2a, κ Isotype Control	0.1 mg	R35-95
555061	HiCK-1 Human Cytokine Positive Control Cells	1.0 ml	(none)
554715	BD Cytofix/Cytoperm Plus Kit (with BD GolgiStop)	250 tests	(none)
554724	Protein Transport Inhibitor (Containing Monensin)	0.7 ml	(none)

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554723	Perm/Wash Buffer	100 ml	(none)
555899	Lysing Buffer	100 ml	(none)
554563	Purified Rat Anti-Human IL-2	0.1 mg	MQ1-17H12
554603	Recombinant Human IL-2	10 µg	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Warning: Some APC-Cy7 and PE-Cy7 conjugates show changes in their emission spectrum with prolonged exposure to formaldehyde. If you are unable to analyze fixed samples within four hours, we recommend that you use BD™ Stabilizing Fixative (Cat. No. 338036).
4. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
5. Cy is a trademark of Amersham Biosciences Limited. This conjugated product is sold under license to the following patents: US Patent Nos. 5,486,616; 5,569,587; 5,569,766; 5,627,027.
6. This product is subject to proprietary rights of Amersham Biosciences Corp. and Carnegie Mellon University and made and sold under license from Amersham Biosciences Corp. This product is licensed for sale only for research. It is not licensed for any other use. If you require a commercial license to use this product and do not have one return this material, unopened to BD Biosciences, 10975 Torreyana Rd, San Diego, CA 92121 and any money paid for the material will be refunded.
7. PE-Cy7 is a tandem fluorochrome composed of R-phycoerythrin (PE), which is excited by 488-nm light and serves as an energy donor, coupled to the cyanine dye Cy7, which acts as an energy acceptor and fluoresces maximally at 780 nm. PE-Cy7 tandem fluorochrome emission is collected in a detector for fluorescence wavelengths of 750 nm and higher. Although every effort is made to minimize the lot-to-lot variation in the efficiency of the fluorochrome energy transfer, differences in the residual emission from PE may be observed. Therefore, we recommend that individual compensation controls be performed for every PE-Cy7 conjugate. PE-Cy7 is optimized for use with a single argon ion laser emitting 488-nm light, and there is no significant overlap between PE-Cy7 and FITC emission spectra. When using dual-laser cytometers, which may directly excite both PE and Cy7, we recommend the use of cross-beam compensation during data acquisition or software compensation during data analysis.
8. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
9. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
10. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
11. This product is manufactured and sold under license from Pestka Biomedical Laboratories, Inc. (d/b/a PBL InterferonSource) and may be used solely as indicated. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics is strictly prohibited. This product is covered by U.S. Patent No. 5,597,901 and Bulgarian Patent No. BG1895.
12. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
13. All other brands are trademarks of their respective owners.

References

Abrams J. Immunoenzymetric assay of mouse and human cytokines using NIP-labeled anti-cytokine antibodies. In: Coligan J, Kruisbeek A, Margulies D, Shevach E, Strober W, ed. *Current Protocols in Immunology.* New York: John Wiley and Sons; 1995:6.20-6.21. (Biology)

Abrams JS, Roncarolo MG, Yssel H, Andersson U, Gleich GJ, Silver JE. Strategies of anti-cytokine monoclonal antibody development: immunoassay of IL-10 and IL-5 in clinical samples. *Immunol Rev.* 1992; 127:5-24. (Biology)

Andersson J, Abrams J, Bjork L, et al. Concomitant in vivo production of 19 different cytokines in human tonsils. *Immunology.* 1994; 83(1):16-24. (Biology)

Fernandez V, Andersson J, Andersson U, Troye-Blomberg M. Cytokine synthesis analyzed at the single-cell level before and after revaccination with tetanus toxoid. *Eur J Immunol.* 1994; 24(8):1808-1815. (Biology)

Gillis S, Ferm MM, Ou W, Smith KA. T cell growth factor: parameters of production and a quantitative microassay for activity. *J Immunol.* 197; 120(6):2027-2032. (Biology)

Meager A. Characterization of interferons and immunoassays. In: Clemens MJ, Morris AG, Gearing AJH, ed. *Lymphockies and Interferons. A Practical Approach.* Oxford: IRL Press Ltd; 1987:105-127. (Biology)

Prussin C, Metcalfe DD. Detection of intracytoplasmic cytokine using flow cytometry and directly conjugated anti-cytokine antibodies. *J Immunol Methods.* 1995; 188(1):117-128. (Methodology: Flow cytometry)

Smith, KA. Interleukin-2: inception, impact, and implications. *Science.* 1988; 240(4856):1169-1176. (Biology)

Sopper S, Stahl-Hennig C, Demuth M, Johnston IC, Dorries R, ter Meulen V. Lymphocyte subsets and expression of differentiation markers in blood and lymphoid organs of rhesus monkeys. *Cytometry.* 1997; 29(4):351-362. (Biology)

Stern AS, Pan YC, Urdal DL, Mochizuki DY, DeChiara S, Blacher R, Wideman J, Gillis S. Purification to homogeneity and partial characterization of interleukin 2 from a human T-cell leukemia. *Proc Natl Acad Sci U S A.* 1984; 81(3):871-875. (Biology)

Taniguchi T, Matsui H, Fujita T, Takaoka C, Kashima N, Yoshimoto R, Hamuro J. Structure and expression of a cloned cDNA for human interleukin-2. *Nature.* 1983; 302(5906):305-310. (Biology)

Verdier F, Aujoulat M, Condevaux F, Descotes J. Determination of lymphocyte subsets and cytokine levels in cynomolgus monkeys. *Toxicology.* 1995; 105(1):81-90. (Biology)

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