

## Alexa Fluor® 647 anti-human IL-4

**Catalog # / Size:** 500818 / 100 tests

**Clone:** MP4-25D2

**Isotype:** Rat IgG1,  $\kappa$

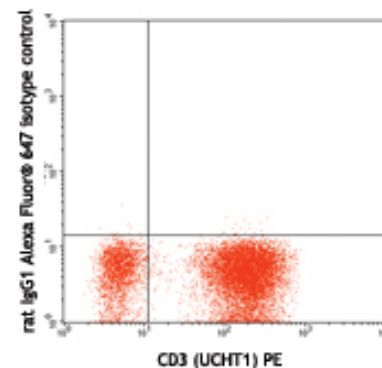
**Immunogen:** CHO-expressed, recombinant human IL-4

**Reactivity:** Human, **Cross-Reactivity:** Swine (Pig, Porcine), Rhesus

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 647 under optimal conditions. The solution is free of unconjugated Alexa Fluor® 647.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

**Storage:** The antibody solution should be stored undiluted at 4°C and protected from prolonged exposure to light. **Do not freeze.**



*PMA/ionomycin-stimulated (6 hours) human peripheral blood lymphocytes stained with rat IgG1 Alexa Fluor® 647 isotype control and CD3 (UCHT1) PE*

## Applications:

**Applications:** ICFC - *Quality tested*

**Recommended Usage:** Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining, the suggested use of this reagent is 5  $\mu$ l per 10<sup>6</sup> cells in 100  $\mu$ l volume. It is recommended that the reagent be titrated for optimal performance for each application.

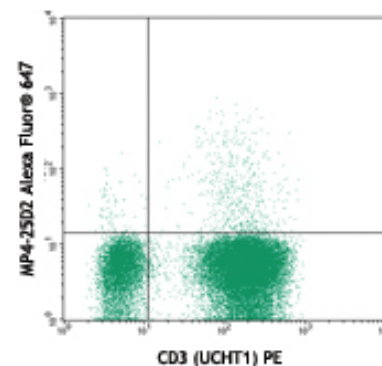
\* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm.

\*\* Alexa Fluor® is a registered trademark of Molecular Probes, Inc. Alexa Fluor® dye antibody conjugates are sold under license from Molecular Probes, Inc. for research use only, except for use in combination with microarrays and high content screening, and are covered by pending and issued patents.

**Application Notes:** **ELISA Detection**<sup>1,3</sup> or **ELISPOT Detection**<sup>4,5</sup>: The biotinylated MP4-25D2 antibody is useful as a detection antibody for a sandwich ELISA or ELISPOT assay, when used in conjunction with purified 8D4-8 antibody (Cat. No. 500702/500707) as the capture antibody.

**Flow Cytometry**<sup>6,9</sup>: The fluorochrome-labeled MP4-25D2 antibody is useful for intracellular immunofluorescent staining and flow cytometric analysis to identify IL-4-producing cells within mixed cell populations. For intracellular cytokine staining protocol, please visit [www.biolegend.com](http://www.biolegend.com) and click on the support section.

**Neutralization**<sup>1-3</sup>: The LEAF™ purified antibody (Endotoxin <0.1 EU/ $\mu$ g, Azide-Free, 0.2  $\mu$ m filtered) is recommended for neutralization of human IL-4 bioactivity (Cat. No. 500815). The MP4-25D2 antibody can neutralize the bioactivity of natural or recombinant IL-4.



*PMA/ionomycin-stimulated (6 hours) human peripheral blood lymphocytes stained with MP4-25D2 Alexa Fluor® 647 isotype control and CD3 (UCHT1) PE*

- Application References:**
1. Chretien I, *et al.* 1989. *J. Immunol. Methods* 117:67. (ELISA Detection, Neut)
  2. Ramanathan L, *et al.* 1993. *Biochem.* 32:3549. (Neut)
  3. Abrams J, *et al.* 1992. *Immunol. Rev.* 127:5. (ELISA Detection, Neut)
  4. Mahanty S, *et al.* 1992. *J. Immunol.* 148:3567. (ELISPOT Detection)
  5. Klinman D, *et al.* 1994. *Curr. Prot. Immunol.* John Wiley and Sons New York. Unit 6.19. (ELISPOT Detection)
  6. Prussin C, *et al.* 1995. *J. Immunol. Methods* 188:117. (ICFC)
  7. Raqib R, *et al.* 1995. *Infect. Immun.* 63:289.
  8. Andersson J, *et al.* 1994. *Immunology* 83:16.
  9. Iwamoto S, *et al.* 2007. *J. Immunol.* 179:1449. (ICFC) PubMed
  10. Kubota M, *et al.* 1997. *J. Immunol.* 158:5321.
  11. Dzhagalov I, *et al.* 2007. *J. Immunol.* 178:2113. PubMed

**Description:** IL-4 is a pleiotropic cytokine that is produced by activated T cells, mast cells, and basophils. IL-4 elicits many different biological responses but has two dominant functions. The first is regulating differentiation of naïve CD4<sup>+</sup> T cell to the Th2 type. Th2 cells produce IL-4, IL-5, IL-10, and IL-13, which tend to favor a humoral immune response while suppressing a cell-mediated immune response controlled by Th1 cells. The second is regulating IgE and IgG1 production by B cells.



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- Antigen References:**
1. Fitzgerald K, *et al.* Eds. 2001. The Cytokine FactsBook. Academic Press San Diego.
  2. Boulay J, *et al.* 1992. *Curr. Opin. Immunol.* 4:294.
  3. Dullens H, *et al.* 1991. *In vivo* 5:567.
  4. Paul W. 1991. *Blood* 77:1859.

Related Products:Product	Clone	Application
Cell Staining Buffer		FC, ICC, ICFC
Fixation Buffer		ICC, ICFC
Permeabilization Wash Buffer (10X)		ICC, ICFC, IHC
Brefeldin A Solution (1,000X)		ICFC
Monensin Solution (1,000X)		ICFC
7-AAD Viability Staining Solution		FC
Alexa Fluor® 647 Rat IgG1, κ Isotype Ctrl	RTK2071	FC, ICFC



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