

# Product Data Sheet

## Alexa Fluor® 647 anti-mouse IL-4

**Catalog # / Size:** 504112 / 25 µg  
504110 / 100 µg

**Clone:** 11B11

**Isotype:** Rat IgG1, κ

**Immunogen:** Partially purified native mouse IL-4

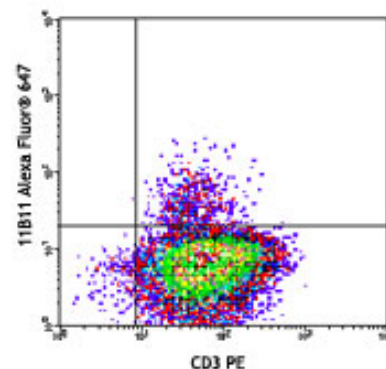
**Reactivity:** Mouse

**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.

**Concentration:** 0.5 mg/ml

**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, in presence of brefeldin A) Th2-polarized C57BL/6 CD4-positive cells were surface stained with CD3 PE and then intracellularly stained with IL-4 (11B11) Alexa Fluor® 647 (top) or rat IgG1, κ Alexa Fluor® 647 isotype control (bottom).

## 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 ≤ 0.25 µg per 10<sup>6</sup> cells in 100 µl 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.

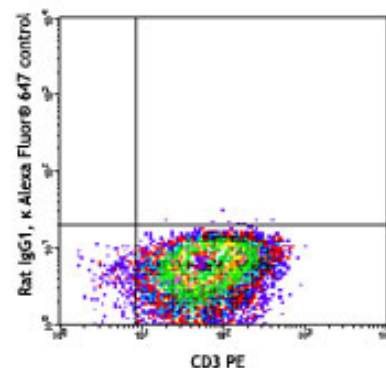
\*\* Alexa Fluor® is a registered trademark of Molecular Probes, Inc. Alexa Fluor® dye antibody conjugates are sold under license from Molecular Probes, Inc. for research use only, except for use in combination with microarrays and high content screening, and are covered by pending and issued patents.

**Application Notes:** **ELISA<sup>1,2,10,13</sup> or ELISPOT<sup>5</sup> Capture:** The purified 11B11 antibody is useful as the capture antibody in a sandwich ELISA or ELISPOT assay, when used in conjunction with the biotinylated BVD6-24G2 antibody (Cat. No. 504202) as the detecting antibody and recombinant mouse IL-4 (Cat. No. 575609) as the standard. The LEAF™ purified antibody is suggested for ELISPOT capture.

**Neutralization<sup>1-2,9,12</sup>:** The 11B11 antibody can neutralize the bioactivity of natural or recombinant IL-4. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for neutralization of mouse IL-4 bioactivity *in vivo* and *in vitro* (Cat. No. 504108).

**Additional reported applications (for the relevant formats) include:** immunoprecipitation, Western blotting, immunohistochemical staining of formalin-fixed paraffin-embedded tissue sections<sup>8</sup> and paraformaldehyde-fixed, saponin-treated frozen tissue sections<sup>6,7</sup>, and immunocytochemistry.

**Note:** For testing mouse IL-4 in serum, plasma or supernatant, BioLegend's ELISA Max™ Sets (Cat. No. 431101 to 431106) are specially developed and recommended.



- Application References:**
- Shirai A, *et al.* 1994. *Cytokine* 6:329. (ELISA, Neut)
  - Abrams J. 1995. *Curr. Prot. Immunol.* John Wiley and Sons New York. Unit 6.20. (ELISA, Neut)
  - Assenmacher M, *et al.* 1994. *Eur. J. Immunol.* 24:1097.
  - Openshaw P, *et al.* 1995. *J. Exp. Med.* 182:1357.
  - Klinman D, *et al.* 1994. *Curr. Prot. Immunol.* John Wiley and Sons New York. Unit 6.19. (ELISA Capture)
  - Litton M, *et al.* 1994. *J. Immunol. Methods* 175:47. (IHC)
  - Andersson U, *et al.* 1999. *Detection and quantification of gene expression.* New York:Springer-Verlag. (IHC)
  - Fan WY, *et al.* 2001. *Exp. Biol. Med.* 226:1045. (IHC)
  - Hara M, *et al.* 2001. *J. Immunol.* 166:3789. (Neut)
  - Dzhagalov I, *et al.* 2007. *J. Immunol.* 178:2113. (ELISA)
  - Lawson BR, *et al.* 2007. *J. Immunol.* 178:5366.



For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.



\*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, [www.biollegend.com/ordering#license](http://www.biollegend.com/ordering#license)). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

12. Wang W, *et al.* 2007. *J. Immunol.* 178:4885. (Neut)
13. Xu G, *et al.* 2007. *J. Immunol.* 179:5358. (ELISA) PubMed
14. Ohnmacht C, *et al.* 2008. *Blood* 113:2816. PubMed
15. Charles N, *et al.* 2010. *Nat. Med.* 16:701. (FC) PubMed

**Description:** IL-4 is a pleiotropic cytokine produced by activated T cells, mast cells, and basophils. IL-4 is a potent lymphoid cell growth factor which stimulates the growth and activation of certain B cells and T cells. IL-4 is important for regulation of T helper subset development.

**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



For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.



\*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, [www.biolegend.com/ordering#license](http://www.biolegend.com/ordering#license)). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.