

PE/Dazzle™ 594 anti-mouse IL-4 Antibody

Catalog# / Size	504131 / 25 µg 504132 / 100 µg
Clone	11B11
Regulatory Status	RUO
Other Names	Interleukin-4, Ia inducing factor (IaIF), B cell stimulating factor-1 (BSF-1), Hodgkin's cell growth factor (HCGF), Mast cell growth factor-2 (MCGF-2), Macrophage fusion factor (MFF), T cell growth factor-2 (TCGF-2)
Isotype	Rat IgG1, κ
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.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Partially purified native mouse IL-4
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with PE/Dazzle™ 594 under optimal conditions.
Concentration	0.2 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is ≤0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. * PE/Dazzle™ 594 has a maximum excitation of 566 nm and a maximum emission of 610 nm.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	ELISA^{1,2,10,13} or ELISPOT⁵ 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^{1-2,9,12}: 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 <i>in vivo</i> and <i>in vitro</i> (Cat. No. 504108). Additional reported applications (for the relevant formats) include: immunoprecipitation ¹⁶ , immunohistochemical staining of formalin-fixed paraffin-embedded tissue sections ⁸ and paraformaldehyde-fixed, saponin-treated frozen tissue sections ^{6,7} , and immunocytochemistry ⁴ . 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	1. Shirai A, <i>et al.</i> 1994. <i>Cytokine</i> 6:329. (ELISA, Neut) 2. Abrams J. 1995. <i>Curr. Prot. Immunol.</i> John Wiley and Sons New York. Unit 6.20. (ELISA, Neut)
(PubMed link indicates	

- BioLegend citation)**
3. Assenmacher M, *et al.* 1994. *Eur. J. Immunol.* 24:1097.
 4. Openshaw P, *et al.* 1995. *J. Exp. Med.* 182:1357. (ICC)
 5. Klinman D, *et al.* 1994. *Curr. Prot. Immunol.* John Wiley and Sons New York. Unit 6.19. (ELISA Capture)
 6. Litton M, *et al.* 1994. *J. Immunol. Methods* 175:47. (IHC)
 7. Andersson U, *et al.* 1999. *Detection and quantification of gene expression.* New York:Springer-Verlag. (IHC)
 8. Fan WY, *et al.* 2001. *Exp. Biol. Med.* 226:1045. (IHC)
 9. Hara M, *et al.* 2001. *J. Immunol.* 166:3789. (Neut)
 10. Dzhagalov I, *et al.* 2007. *J. Immunol.* 178:2113. (ELISA)
 11. Lawson BR, *et al.* 2007. *J. Immunol.* 178:5366.
 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](#)
 16. Zavorotinskaya T, *et al.* 2003. *Mol. Ther.* 7:155. (IP)

- Product Citations**
1. Sendler M, *et al.* 2020. *Gastroenterology.* 158:253. [PubMed](#)
 2. Trittel S, *et al.* 2019. *Sci Rep.* 9:16362. [PubMed](#)

RRID

AB_2564558 (BioLegend Cat. No. 504131)
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Antigen Details

Structure	Cytokine; 15-19 kD (Mammalian)
Bioactivity	Differentiation of naïve CD4 ⁺ T cells to the T _H 2 type, proliferation/differentiation of activated B cells, expression of class II MHC antigens, and of low affinity IgE receptors in resting B cells
Cell Sources	Mast cells, T cells, bone marrow stromal cells
Cell Targets	B cells, T cells, monocytes, endothelial cells, fibroblasts
Receptors	Heterodimer IL-4R α (CD124); γ -subunit (CD132) in common with IL-2R, IL-7R, IL-13R, IL-15R
Cell Type	Tregs
Biology Area	Immunology
Molecular Family	Cytokines/Chemokines
Antigen References	<ol style="list-style-type: none">1. Fitzgerald K, <i>et al.</i> Eds. 2001. <i>The Cytokine FactsBook.</i> Academic Press San Diego.2. Boulay J, <i>et al.</i> 1992. <i>Curr. Opin. Immunol.</i> 4:294.3. Dullens H, <i>et al.</i> 1991. <i>In vivo</i> 5:567.4. Paul W. 1991. <i>Blood</i> 77:1859.
Regulation	Upregulated by IL-2, platelet activating factor; downregulated by TGF- β
Gene ID	16189

Related Protocols

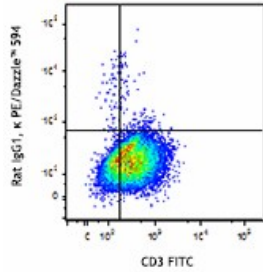
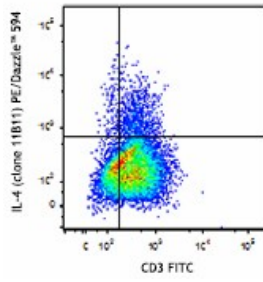
[Intracellular Cytokine Staining Protocol - Video](#)

[Intracellular Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-mouse IL-4, PE anti-mouse IL-4, Purified anti-mouse IL-4, Alexa Fluor® 488 anti-mouse IL-4, Alexa Fluor® 647 anti-mouse IL-4, PE/Cyanine7 anti-mouse IL-4, Brilliant Violet 421™ anti-mouse IL-4, Ultra-LEAF™ Purified anti-mouse IL-4, PerCP/Cyanine5.5 anti-mouse IL-4, Brilliant Violet 605™ anti-mouse IL-4, Purified anti-mouse IL-4 (Maxpar® Ready), PE/Dazzle™ 594 anti-mouse IL-4, Brilliant Violet 711™ anti-mouse IL-4, APC/Fire™ 750 anti-mouse IL-4

Product Data



PMA+ionomycin-stimulated (6 hours, in the presence of brefeldin A) Th2-polarized C57BL/6 T cells were surface stained with CD3 FITC and then were intracellularly stained with IL-4 (clone 11B11) PE/Dazzle™ 594 (top), or rat IgG1, κ PE/Dazzle™ 594 isotype control (bottom).

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