TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
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Anti-Mouse IL-4 Antibody, Clone 11B11, APC

Rat monoclonal antibody against mouse IL-4, APC-conjugated

Catalog #100-1620 | 100 µg | 0.2 mg/mL

Product Description

This monoclonal antibody reacts with mouse interleukin-4 (IL-4), a 14 kDa cytokine that is expressed by Th2-biased CD4+ T cells, mast cells, basophils, and eosinophils. IL-4 is a lymphoid cell growth factor and signals through the IL-4 receptor alpha chain (IL-4Rα) upon binding. This causes the stimulation of activated B and T lymphocytes as well as the differentiation of B cells into plasma cells. IL-4 has the capability to attach and transmit signals through three different cell surface receptors: CD124, CD124 in combination with the common gamma chain (type I complex), or CD124 combined with CD213a1 (type II complex). Signal transducer and activator of transcription 6 (STAT6) has been shown to play an important role in mediating the immune regulatory signal of IL-4. IL-4 has been shown to play a role in normal wound healing and the development of allergic inflammation and asthma.

Target Antigen:	IL-4
Alternative Names:	B cell growth factor 1, B cell IgG differentiation factor, B cell stimulatory factor 1 (BSF-1), IGG1 induction factor, interleukin-4, lymphocyte stimulatory factor 1
Gene ID:	16189
Species Reactivity:	Mouse
Host Species:	Rat
Clonality:	Monoclonal
Clone:	11B11
Isotype:	IgG1, kappa
Immunogen:	Partially purified mouse IL-4
Conjugate:	APC (Allophycocyanin)

Applications

Verified Applications:	FC
Reported Applications:	FC

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; FCXM: Flow cytometric crossmatch assay; FISH: Fluorescence in situ hybridization; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IHC-F: Immunohistochemistry (frozen-tissue); IHC-P: Immunohistochemistry (paraffin-embedded); IP: Immunoprecipitation; NMR: Nuclear magnetic resonance spectroscopy; RIA: Radioimmunoassay; WB: Western blotting

Properties

Product Formulation:	Phosphate-buffered saline, pH 7.2, containing 0.09% sodium azide and 0.1% gelatin
Purification:	The antibody was purified by affinity chromatography and conjugated with APC under optimal conditions. The solution is free of unconjugated APC.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. Stable until expiry date (EXP) on label.
Directions for Use:	For flow cytometry, the suggested use of this antibody is ≤ 1 µg per 1 x 10^6 cells in 100 µL. It is recommended that the antibody be titrated for optimal performance for each application.

Related Products

For a complete list of antibodies, including other conjugates, sizes, and clones, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/antibodies, or contact us at techsupport@stemcell.com.

References

Brenner E et al. (2020) Cancer immune control needs senescence induction by interferon-dependent cell cycle regulator pathways in tumours. Nat Commun 11(1): 1335.
Deng Z et al. (2019) Characterization of articular cartilage homeostasis and the mechanism of superior cartilage regeneration of MRL/MpJ mice. FASEB J 33(8): 8809–21.
Guo J et al. (2022) Cancer vaccines from cryogenically silicified tumour cells functionalized with pathogen-associated molecular patterns. Nat Biomed Eng 6(1): 19–31.
Huang L jie et al. (2021) Multiomics analyses reveal a critical role of selenium in controlling T cell differentiation in Crohn's disease. Immunity 54 (8): 1728–44.
Ma X et al. (2020) Nanoparticle vaccines based on the receptor binding domain (RBD) and heptad repeat (HR) of SARS-CoV-2 elicit robust protective immune responses. Immunity 53(6): 1315–30.
Noben-Trauth N et al. (1997) An interleukin 4 (IL-4)-independent pathway for CD4+ T cell IL-4 production is revealed in IL-4 receptor-deficient mice. Proc Natl Acad Sci U S A 94(20): 10838–43.
Ong C et al. (1998) Anti-IL-4 treatment prevents dermal collagen deposition in the tight-skin mouse model of scleroderma. Eur J Immunol 28 (9):2619–29.
Strait RT et al. (2003) IL-4 exacerbates anaphylaxis. J Immunol 170(7): 3835–42.
Wang JJ et al. (1989) Immunocytochemical demonstration of the binding and internalization of growth hormone, b-cell stimulating factor-1 and thy-1.2 in murine lymphocytes. Acta Histochem Cytochem 22(1): 77–88.
Wu B et al. (2018) RAS P21 protein activator 3 (RASA3) specifically promotes pathogenic T helper 17 cell generation by repressing T helper 2-biased programs. Immunity 49(5): 886–98.
Wu J et al. (2017) Ablation of transcription factor IRF4 promotes transplant acceptance by driving allogenic CD4+ T cell dysfunction. Immunity 47 (6): 1114–28.