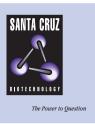
# SANTA CRUZ BIOTECHNOLOGY, INC.

# IL-4 (21-F2): sc-80096



# BACKGROUND

Interleukin-4 (IL-4), also designated B cell stimulatory factor-1, is a glycosylated cytokine secreted by activated T lymphocytes, basophils and mast cells. The secreted IL-4 protein promotes the growth and differentiation of cells that participate in immune defense by favoring such events as the expansion of the Th2 lineage relative to Th1 cells. These T helper cell subsets are defined by their pattern of cytokine secretion: Th1 cells secrete IL-2, TNF $\beta$  and IFN- $\gamma$ , while Th2 cells secrete IL-4, IL-5 and IL-10. Another key immunological function of IL-4 is to induce immunoglobulin class switching. IL-4 has been shown to induce the production of IgE and enhance IgG<sub>4</sub> secretion by B cells, but suppress the production of IgM, IgA, IgG<sub>1</sub>, IgG<sub>2</sub> and IgG<sub>3</sub>. It has been determined that Stat6 is rapidly tyrosine phosphorylated following stimulation of IL-3 or IL-4, but is not detectably phosphorylated following stimulation with IL-2, IL-12 or erythropoietin.

# REFERENCES

- 1. Yokota, T., et al. 1986. Isolation and characterization of a human interleukin cDNA clone, homologous to mouse B cell stimulatory factor 1, that expresses B cell- and T cell-stimulating activities. Proc. Natl. Acad. Sci. USA 83: 5894-5898.
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- Kopf, M., et al. 1993. Disruption of the murine IL-4 gene blocks Th2 cytokine responses. Nature 362: 245-248.
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- 9. Perkins, C., et al. 2006. IL-4 induces IL-13-independent allergic airway inflammation. J. Allergy Clin. Immunol. 118: 410-419.

# SOURCE

IL-4 (21-F2) is a mouse monoclonal antibody raised against full length recombinant IL-4 of pig origin.

# PRODUCT

Each vial contains 100  $\mu g~lgG_1$  in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

# APPLICATIONS

IL-4 (21-F2) is recommended for detection of IL-4 of pig origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of IL-4: 18 kDa.

#### **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

#### **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

# PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.