



## 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

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3. Kamogawa, Y., et al. 1993. The relationship of IL-4- and IFN- $\gamma$ -producing T cells studied by lineage ablation of IL-4-producing cells. *Cell* 75: 985-995.
4. Kopf, M., et al. 1993. Disruption of the murine IL-4 gene blocks Th2 cytokine responses. *Nature* 362: 245-248.
5. Kotowicz, K., et al. 1993. Human immunoglobulin class and IgG subclass regulation: dual action of interleukin-4. *Eur. J. Immunol.* 23: 2250-2256.
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### 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 IgG<sub>1</sub> 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](http://www.scbt.com) or our catalog for detailed protocols and support products.