



# Rat anti Mouse IL4 monoclonal antibody, clone 41451S (CABT-L352)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Specificity</b>	Detects mouse IL-4 in direct ELISAs.
<b>Target</b>	IL-4
<b>Immunogen</b>	E.coli-derived recombinant mouse IL-4, His23-Ser140, Accession #P07750
<b>Isotype</b>	IgG1
<b>Source/Host</b>	Rat
<b>Species Reactivity</b>	Mouse
<b>Clone</b>	41451S
<b>Purification</b>	Protein A or G purified from cell culture supernatant
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	ELISA(Cap)
<b>Format</b>	Liquid
<b>Size</b>	100 µg, 500 µg, 1 mg
<b>Buffer</b>	PBS with BSA
<b>Preservative</b>	None
<b>Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C, as supplied. 1 month, 2 to 8 °C under sterile conditions after opening. 6 months, -20 to -70 °C under sterile conditions after opening.

**Ship**

The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. \*Small pack size (SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C.

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## BACKGROUND

**Introduction**

Interleukin-4 (IL-4), also known as B cell-stimulatory factor-1, is a monomeric, approximately 13-18 kDa Th2 cytokine that shows pleiotropic effects during immune responses. It is a glycosylated polypeptide that contains three intrachain disulfide bridges and adopts a bundled four alpha-helix structure. Mouse IL-4 is synthesized with a 24 amino acid (aa) signal sequence. Mature mouse IL-4 shares 39%, 39%, and 59% aa sequence identity with bovine, human, and rat IL-4, respectively. Human, mouse, and rat IL-4 are species-specific in their activities. IL-4 exerts its effects through two receptor complexes. The type I receptor, which is expressed on hematopoietic cells, is a heterodimer of the ligand binding IL-4 R alpha and the common gamma chain (a shared subunit of the receptors for IL-2,-7,-9,-15, and-21). The type II receptor on nonhematopoietic cells consists of IL-4 R alpha and IL-13 R alpha 1. The type II receptor also transduces IL-13 mediated signals. IL-4 is primarily expressed by Th2-biased CD4+ T cells, mast cells, basophils, and eosinophils. It promotes cell proliferation, survival, and immunoglobulin class switch to IgG1 and IgE in mouse B cells, acquisition of the Th2 phenotype by naïve CD4+ T cells, priming and chemotaxis of mast cells, eosinophils, and basophils, and the proliferation and activation of epithelial cells. IL-4 plays a dominant role in the development of allergic inflammation and asthma.

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**Keywords**

B cell growth factor 1;BCDF;B-cell stimulatory factor 1;BCGF1;BCGF-1;binetrakin;BSF1;BSF-1;IL4;IL-4;IL-4B\_cell stimulatory factor 1;interleukin 4;interleukin-4;Lymphocyte stimulatory factor 1;MGC79402;pitrakinra

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## GENE INFORMATION

**Entrez Gene ID**

[16189](#)

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**UniProt ID**

[P07750](#)

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