

Interleukin-4 ELISA Kit | IL-4 elisa kit

Interleukin-4 (IL-4)

CATALOG #
AAA77876

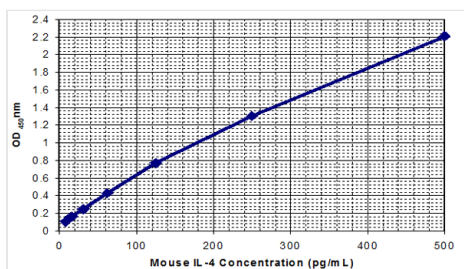
PRODUCT SYNONYMS

Interleukin-4; Interleukin-4 (IL-4); IL-4 elisa kit

PRODUCT SPECIFICATIONS

Sequence Length	153
Samples	Serum, Cell Culture Supernatant, and other biological fluids
Assay Type	Sandwich
Sensitivity	The minimum detectable dose of mouse IL-4 was determined by adding two standard deviations to the mean optical density value of 16 zero standard replicates and calculating the corresponding concentration from the standard curve. The minimum detectable dose of mouse IL-4 calculated from calibrate I diluted standard curve was <0.8pg/mL.
Intra-assay Precision	To determine within-run precision, three different samples of known concentration were assayed by using 16 replicates in 1 assay.
Inter-assay Precision	To determine between-run precision, three different samples of known concentration were assayed by using replicates on 8 different assays.
Intended Uses	This Mouse IL-4 ELISA kit is to be used for the in vitro quantitative determination of mouse interleukin 4 (IL-4) concentrations in serum, cell culture supernatant, and other biological fluids. This kit is intended for LABORATORY RESEARCH USE ONLY.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for IL-4 elisa kit	Principle of the assay: This mouse IL-4 enzyme-linked immunosorbent assay (ELISA) applies a technique called a quantitative sandwich immunoassay. The microtiter plate provided in this kit has been pre-coated with a monoclonal antibody specific for mouse IL-4. When standards or samples are added to the appropriate microtiter plate wells, mouse IL-4 in the standards or samples will be immobilized by the precoated antibody during incubation. Then, a biotin-conjugated antibody preparation specific for mouse IL-4 is added to each well and incubated. The biotin labelled antibody attaches to the wells by binding to mouse IL-4. After plate washing, other proteins, components and unattached biotin labelled antibody is removed. After that, avidin-horseradish peroxidase (HRP) conjugate is added to each well. Avidin has a very high affinity for biotin, thus, it links the tracer (HRP) sturdily to the biotin labelled antibody. The wells are thoroughly washed to remove all unbound avidin- HRP conjugate and a TMB (3,3', 5,5' tetramethyl-benzidine) substrate solution is added to each well. The enzyme (HRP) and substrate are allowed to react over a short incubation period. Only wells that contain mouse IL-4 will exhibit a change in colour. The extent of colour change is proportional to the quantity of mouse IL-4 present in the standards/samples. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the colour change is measured spectrophotometrically at a wave length of 450 nm +/- 2 nm. In order to measure the concentration of mouse IL-4 in the samples, this kit contains two calibration diluents (Calibrator Diluent I for serum/plasma testing and Calibrator Diluent II for cell culture supernatant testing). According to the testing system, the provided standard is diluted (2-fold) with the appropriate Calibrator Diluent and assayed at the same time as the samples. This allows the operator to produce a standard curve of Optical Density (O.D.) versus IL-4 concentration (pg/mL). The concentration of mouse IL- 4 in the samples is then determined by comparing the O.D. of the samples to the standard curve. Background: IL-4 is a very important B cell stimulation and differentiation factor. In addition, IL-4 modulates the immune function of other cell types including T cells, monocytes, macrophages, mast cells, fibroblasts, endothelial cells, osteoblasts, keratinocytes, hepatocytes, and astrocytes. IL-4 is mainly produced by CD4+ TH0 and TH2 cells, CD8+ T cells, and mast cells. IL-4 is the polarizing cytokine for TH2 phenotype. The gene for mouse IL-4 is mapped to chromosome 11 in close conjunction with genes for other T-helper 2 cytokines such as IL-13, GM-CSF, IL-5. Mouse IL-4 is a disulfide bond linked homodimer containing 113 amino acids in each subunit. The receptor for IL-4 is a heterodimer with a cytokine specific alpha unit, and a signal transduction beta subunit that is identical to the beta subunit of receptors for IL-13 and GM-CSF. IL-4 receptor alpha (IL- 4Ra) is expressed by eosinophils, B cells and basophils in member-bound form and soluble form. While the membrane bound form participates in the activation of eosinophils and B cells, the soluble form of IL-4Ra has an antagonist effect to IL-4. Increased IL-4 expression causes chronic IgE response and hypereosinophilic syndromes. Elevated IL-4 level is found in allergic diseases such as allergic rhinitis, asthma and allergic conjunctivitis.
Product Categories/Family for IL-4 elisa kit	ELISA Kits for Mouse Cytokines and Receptors

NCBI AND UNIPROT INFORMATION

NCBI GI #	4504669
NCBI GeneID	3565
NCBI Accession #	NP_000580.1
NCBI GenBank Nucleotide #	NM_000589.3
Molecular Weight	15,797 Da
NCBI Official Full Name	interleukin-4 isoform 1
NCBI Official Synonym Full Names	interleukin 4
NCBI Official Symbol	IL4
NCBI Official Synonym Symbols	BSF1; IL-4; BCGF1; BSF-1; BCGF-1
NCBI Protein Information	interleukin-4; B cell growth factor 1; B_cell stimulatory factor 1; binetrakin; interleukin 4 variant 2; lymphocyte stimulatory factor 1; pitrakinra
UniProt Protein Name	Interleukin-4
UniProt Gene Name	IL4
UniProt Entry Name	IL4_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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