

Interleukin-1beta ELISA Kit | IL-1beta elisa kit

Interleukin-1beta (IL-1beta)

CATALOG #
AAA77886

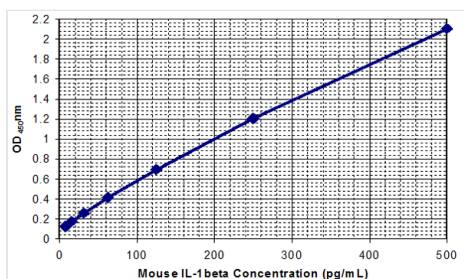
PRODUCT SYNONYMS

Interleukin-1beta; Interleukin-1beta (IL-1beta); Interleukin-1b (IL-1b); IL-1beta elisa kit

PRODUCT SPECIFICATIONS

Sequence Length	248
Samples	Serum, Cell Culture Supernatant, and other biological fluids
Assay Type	Sandwich
Sensitivity	The minimum detectable dose of mouse IL-1beta 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-1beta 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-1beta ELISA kit is to be used for the in vitro quantitative determination of mouse interleukin 1 (IL-1beta) 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-1beta elisa kit	Principle of the assay: This mouse IL-1beta 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-1beta. Standards or samples are then added to the appropriate microtiter plate wells and incubated. Mouse IL-1beta, if present, will bind and become immobilized by the antibody pre-coated on the wells. A biotin-conjugated antibody preparation specific for mouse IL-1beta is added to each well and incubated. The biotin labelled antibody will attach to the wells by binding to mouse IL-1beta present in the standards/samples. After plate washing, other proteins, components and unattached biotin labelled antibody are removed. Then, avidinhorseradish 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 conjugated 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 the wells that contain mouse IL-1beta will exhibit a change in colour. The extent of colour change is proportional to the quantity of mouse IL-1beta 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 wavelength of 450 nm +/- 2 nm. In order to measure the concentration of mouse IL- IL-1beta in the samples, this kit contains two calibration diluents (Calibrator Diluent I for serum/plasma testing and Calibrator Diluent II for cell culture supernatant/ urine 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-1beta concentration (pg/mL). The concentration of IL-1beta in the samples is then determined by comparing the O.D. of the samples to the standard curve. Background: Interleukin 1 (IL-1) is first cytokine super-family identified during the early research on cell secreted factors that regulator fever and inflammatory reaction. IL-1 is also known as lymphocyte activating factor, endogenous pyrogen, catabolin, hemopoietin-1, melanoma growth inhibition factor, and osteoclast activating factor. The properties and biological activities of IL-1 have been extensively reviewed. The two most studied members in the family are Interleukin 1alpha (IL-1alpha) and Interleukin 1beta(IL-1beta). IL-1alpha (also known as IL-1F1) and IL-1beta (also known as IL-1F2) are distinct gene products, but they recognize the same receptors and have similar biological properties. A natural antagonist of IL-1alpha and IL-1beta called IL-1Ra was found to compete with IL-1alpha and IL-1beta for membrane receptor binding to down-regulate the activity of IL-1alpha and IL-1beta. IL-1beta is primarily produced by activated macrophage as a proprotein, which is cleaved by caspase I to become active. Like IL-1alpha, IL-1beta is an important mediator of innate immunity. IL-1beta stimulates lymphocyte proliferation and the production of TNF-alpha, IL-6 and IL-8. IL-1beta and TNF-alpha can synergically act at NFkappaB and mitogen kinases including JNKs and p38 MARKs, thus leading to the selective expression of genes for immunity and inflammation.
Product Categories/Family for IL-1beta elisa kit	ELISA Kits for Mouse Cytokines and Receptors

NCBI AND UNIPROT INFORMATION

NCBI GI #	152962704
Molecular Weight	28,253 Da
NCBI Official Full Name	interleukin-1beta
UniProt Protein Name	Interleukin-1beta
UniProt Gene Name	IL-1 beta
UniProt Entry Name	A7BIE0_CONMY

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.