abcam

Product datasheet

Mouse IL-1 beta ELISA kit ab108866

1 References 1 Image

Overview

Product name Mouse IL-1 beta ELISA kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Overall				4.2%

Inter-assay

Sample	n	Mean	SD	CV%
Overall				10%

Sample type Cell culture supernatant, Serum, Plasma

Assay type Sandwich (quantitative)

Sensitivity = 6.7 pg/ml

Range 60 pg/ml - 500 pg/ml

Recovery 97 %

Assay time 5h 00m

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Mouse

Product overview Abcam's IL-1 beta (Interleukin-1 beta) mouse *in vitro* ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of mouse IL-1 beta concentrations in plasma, serum and cell culture supernatants.

An IL-1 beta specific antibody has been precoated onto 96-well plates and blocked. Standards or test samples are added to the wells and subsequently an IL-1 beta specific biotinylated detection antibody is added and then followed by washing with wash buffer. Streptavidin-Peroxidase Conjugate is added and unbound conjugates are washed away with wash buffer. TMB is then used to visualize Streptavidin-Peroxidase enzymatic reaction. TMB is catalyzed by Streptavidin-Peroxidase to produce a blue color product that changes into yellow after adding acidic stop solution. The density of yellow coloration is directly proportional to the amount of IL-1 beta captured in plate.

Get better reproducibility in only 90 minutes with Mouse IL-1 beta ELISA Kit (**ab197742**) from our SimpleStep ELISA® range.

The entire kit may be stored at -20°C for long term storage before reconstitution - Avoid repeated freeze-thaw cycles.

Platform Microplate

Properties

Storage instructions Store at -20°C. Please refer to protocols.

Components	1 x 96 tests
100X Streptavidin-Peroxidase Conjugate	1 x 80µl
10X Diluent N Concentrate	1 x 30ml
1X Standard Diluent	1 x 2ml
20X Wash Buffer Concentrate	2 x 30ml
50X Biotinylated Mouse IL-1 beta Antibody	1 x 120µl
Chromogen Substrate	1 x 7ml
IL-1 beta Microplate (12 x 8 well strips)	1 unit
IL-1 beta Standard	1 vial
Sealing Tapes	3 units
Stop Solution	1 x 11ml

Function Potent proinflammatory cytokine. Initially discovered as the major endogenous pyrogen, induces prostaglandin synthesis, neutrophil influx and activation, T-cell activation and cytokine production, B-cell activation and antibody production, and fibroblast proliferation and collagen production. Promotes Th17 differentiation of T-cells.

Tissue specificity Expressed in activated monocytes/macrophages (at protein level).

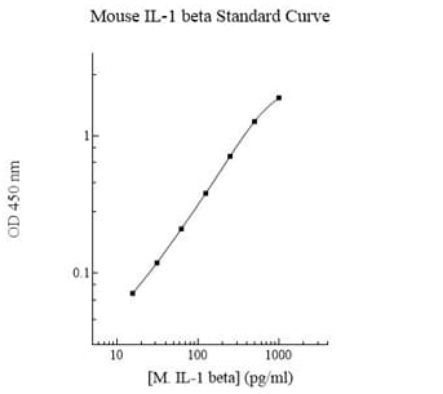
Sequence similarities Belongs to the IL-1 family.

Post-translational modifications Activation of the IL1B precursor involves a CASP1-catalyzed proteolytic cleavage. Processing and secretion are temporarily associated.

Cellular localization Cytoplasm, cytosol. Lysosome. Secreted, exosome. Cytoplasmic vesicle, autophagosome. Secreted. The precursor is cytosolic. In response to inflammasome-activating signals, such as ATP for NLRP3 inflammasome or bacterial flagellin for NLRC4 inflammasome, cleaved and secreted. IL1B lacks any known signal sequence and the pathway(s) of its secretion is(are) not yet fully understood (PubMed:24201029). On the basis of experimental results, several unconventional secretion mechanisms have been proposed. 1. Secretion via secretory lysosomes: a fraction of CASP1 and IL1B precursor may be incorporated, by a yet undefined

mechanism, into secretory lysosomes that undergo Ca(2+)-dependent exocytosis with release of mature IL1B (PubMed:15192144). 2. Secretory autophagy: IL1B-containing autophagosomes may fuse with endosomes or multivesicular bodies (MVBs) and then merge with the plasma membrane releasing soluble IL1B or IL1B-containing exosomes (PubMed:24201029). However, autophagy impacts IL1B production at several levels and its role in secretion is still controversial. 3. Secretion via exosomes: ATP-activation of P2RX7 leads to the formation of MVBs containing exosomes with entrapped IL1B, CASP1 and other inflammasome components. These MVBs undergo exocytosis with the release of exosomes. The release of soluble IL1B occurs after the lysis of exosome membranes (By similarity). 4. Secretion by microvesicle shedding: activation of the ATP receptor P2RX7 may induce an immediate shedding of membrane-derived microvesicles containing IL1B and possibly inflammasome components. The cytokine is then released in the extracellular compartment after microvesicle lysis (PubMed:11728343). 5. Release by translocation through permeabilized plasma membrane. This may occur in cells undergoing pyroptosis due to sustained activation of the inflammasome (By similarity). These mechanisms may not be not mutually exclusive.

Images



Typical Standard Curve

Representative Standard Curve using ab108866

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