abcam

Product datasheet

# Mouse IL-1 beta Matched Antibody Pair Kit ab210895

Recombinant

2 References 2 Images

## Overview

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|---|---|
| **Product name** | Mouse IL-1 beta Matched Antibody Pair Kit |
| **Detection method** | Colorimetric |
| **Assay type** | ELISA set |
| **Sensitivity** | 1.7 pg/ml |
| **Range** | 7.8 pg/ml - 500 pg/ml |
| **Species reactivity** | **Reacts with:** Mouse |
| **Product overview** | Mouse IL-1 beta Matched Antibody Pair Kits include a capture and a biotinylated detector antibody pair, along with a calibrated protein standard, suitable for sandwich ELISA. The Matched Antibody Pair Kit can be used to quantify native and recombinant mouse IL-1 beta.<br><br>Optimization of the kit reagents to sample type, immunoassay format or instrumentation may be required. Guidelines for use of this kit in a standard 96-well microplate sandwich ELISA using HRP/TMB system of colorimetric detection is described in this assay procedure for the purposes of quantification.<br><br>Protocol information and tips on the use of the Matched Antibody Pair kits for sandwich ELISA can be found on our **website**. An accessory pack can be purchased which includes buffer reagents required to perform 10 x 96-well plate sandwich ELISAs (**ab210905**).<br><br>For additional information on the performance of the antibody pair used in this kit, please see our equivalent SimpleStep ELISA kit **ab197742**. Please note that while the antibody pair is the same provided in the corresponding SimpleStep ELISA Kit, due to differences in their formulation, this antibody pair cannot be used with the consumables provided with our SimpleStep ELISA Kits. |
| **Tested applications** | **Suitable for:** ELISA, IA |
| **Platform** | Reagents |

## Properties

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

| Components | 5 x 96 tests |
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| Mouse IL-1b Capture Antibody | 2 x 50µg |
| Mouse IL-1b Detector Antibody | 2 x 12.5µg |
| Mouse IL-1b Lyophilized Protein | 2 vials |

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| **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. |

## Applications

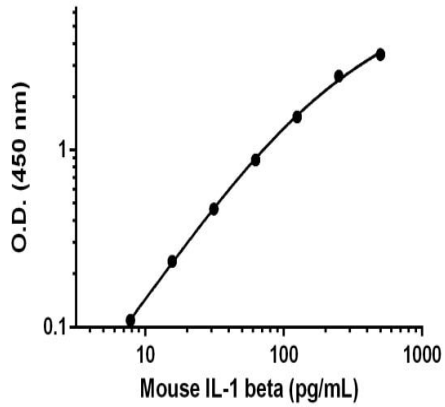
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab210895 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **ELISA** | | Use at an assay dependent concentration. |
| **IA** | | Use at an assay dependent concentration. |

| Application | Abreviews | Notes |
|---|---|---|
| | | |

## Images




Standard calibration curve. Background subtracted values are graphed.


Sandwich ELISA - Mouse IL-1 beta Matched Antibody Pair Kit (ab210895)

To learn more about the advantages of recombinant antibodies see **here**.



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