

Product datasheet

Anti-IL-1 beta antibody [EPR16805-1] - BSA and Azide free (Capture) ab242452

Recombinant RabMAb

2 Images

Overview

Product name	Anti-IL-1 beta antibody [EPR16805-1] - BSA and Azide free (Capture)
Description	Rabbit monoclonal [EPR16805-1] to IL-1 beta - BSA and Azide free (Capture)
Host species	Rabbit
Tested applications	Suitable for: Sandwich ELISA
Species reactivity	Reacts with: Mouse
Immunogen	Recombinant full length protein. This information is proprietary to Abcam and/or its suppliers.
General notes	<p>ab242452 is a BSA and Azide Free antibody supplied in an unconjugated format and it is suitable for sandwich ELISAs to quantify Mouse IL-1beta. The recommended pair for sandwich ELISA is:</p> <p>Capture: ab242452, Mouse IL-1beta Capture Antibody (unconjugated) Detector: ab242703, Mouse IL-1beta Detector Antibody (unconjugated)</p> <p>The reference range value is 7.8 - 500 pg/ml.</p> <p>Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>The recommended antibody orientation is based on internal optimization for ELISA-based assays. Antibody orientation is assay dependent and needs to be optimized for each assay type. Please note that the range provided for this antibody is only an estimation based on the performance of the product using the recommended antibody pair. Performance of the antibody pair will depend on the specific characteristics of your assay. We guarantee the product works in sandwich ELISA, but we do not guarantee the sensitivity or dynamic range of the antibody in your assay.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p>

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free production

For more information [see here](#).

Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMAb[®] patents](#).

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C.
Storage buffer	Constituent: 100% PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR16805-1
Isotype	IgG

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab242452 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

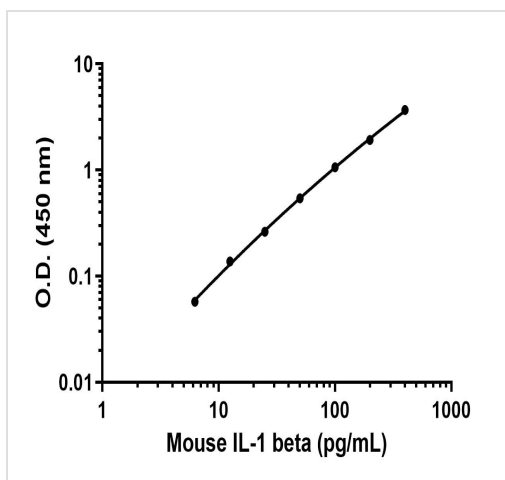
Application	Abreviews	Notes
Sandwich ELISA		Use at an assay dependent concentration. Can be paired for Sandwich ELISA with PE / R-Phycoerythrin Conjugation Kit - Lightning-Link[®] (ab102918) and Biotinylation Kit / Biotin Conjugation Kit (Fast and Type A) - Lightning-Link[®] (ab201795) and Rabbit monoclonal [EPR16805-57] to IL-1 beta - BSA and Azide free (Detector) (ab242703) .

Target

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 mutually exclusive.

Images



Sandwich ELISA - Recombinant mouse IL-1 beta protein standard curve.

Background subtracted standard curve using Anti-IL-1 beta antibody [EPR16805-1] - BSA and Azide free (Capture), Anti-IL-1 beta antibody [EPR16805-57] - BSA and Azide free (Detector), and Recombinant mouse IL-1 beta protein (Active) ([ab259421](#)) in sandwich ELISA.

Sandwich ELISA - Anti-IL-1 beta antibody
[EPR16805-1] - BSA and Azide free (Capture)
(ab242452)

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-IL-1 beta antibody [EPR16805-1] - BSA and Azide free (Capture) (ab242452)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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