abcam

ab234437

Anti-IL-1 beta antibody [EPR16805-15]

Anti-IL-1 beta antibody [EPR16805-15] (ab234437) is a rabbit monoclonal antibody detecting IL-1 beta in **Western Blot, Flow Cytometry (Intra), IP, ICC/IF**. Suitable for **Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 60 publications

Lab Essentials | Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR16805-15
Purification technique	Affinity purification Protein A
Specificity	IL-1 beta is not present under homeostatic conditions; it is induced and secreted only upon inflammatory signals and its secretion is tightly controlled at the levels of transcription, mRNA stability, translation, post-translational modifications and processing (PMID: 26686225).
Concentration	0.564 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse

Dilution info	1/50
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/60
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information Il1b

Function	Potent pro-inflammatory 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. Synergizes with IL12/interleukin-12 to induce IFNG synthesis from T-helper 1 (Th1) cells. Plays a role in angiogenesis by inducing VEGF production synergistically with TNF and IL6. Involved in transduction of inflammation downstream of pyroptosis: its mature form is specifically released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-IL-1 beta antibody [EPR16805-15] (ab234437) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunocytochemistry/immunofluorescence (ICC/IF) in Mouse, Rat samples.

What is the molecular weight of IL-1 beta?
Anti-IL-1 beta [EPR16805-15] (ab234437) specifically detects a band for IL-1 beta (UniProt: P10749) at a molecular weight of 30kDa.

Trusted by the scientific community
Anti-IL-1 beta [EPR16805-15] (ab234437) was first used in a scientific publication in 2019 and has been cited over 60 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EPR16805-15] also available for your convenience: ab234437, Carrier free - ab244612, Carrier free - ab254195

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

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

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

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our

selection of trial-size antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

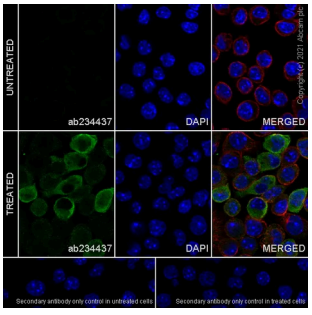
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

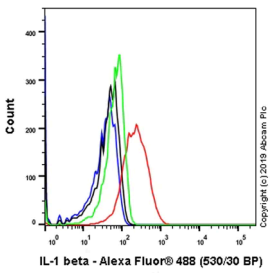
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-IL-1 beta antibody [EPR16805-15] (ab234437)

IL-1 beta Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-IL-1 beta antibody

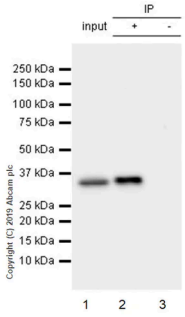
Immunohistochemical analysis of 4% paraformaldehyde fixed, 0.1% TritonX-100 permeabilised J774A.1 (mouse reticulum cell sarcoma monocyte macrophage) cells labeling IL-1 beta with ab234437 at 1/50 (10µg/ml) dilution. ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was used as a secondary antibody at 1/1000 (2µg/ml) dilution. Counterstained with ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594). Nuclear staining: DAPI.
Confocal image showing cytoplasmic staining in J774A.1 cells treated with Lipopolysaccharides (100 ng/ml) for 4h, with addition of brefeldin A (1 µg/ml) for the last 3 hours.



Flow Cytometry (Intracellular) - Anti-IL-1 beta antibody [EPR16805-15] (ab234437)

IL-1 beta Flow Cytometry (Intracellular) staining using rabbit Anti-IL-1 beta antibody

Intracellular flow cytometric analysis of4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized RAW 264.7 (mouse macrophage cell line transformed with Abelson murine leukemia virus) cells that were either treated (100 ng/ml LPS for 3h, then add 300 ng/ml Brefeldin A for 3h labeling) (red) or untreated (green) labeling IL-1 beta with ab234437 at 1/60 dilution compared with a rabbit monoclonal IgG Isotype control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti-Rabbit IgG (Alexa Fluor® 488, ab150077), at 1/2000 dilution was used as the secondary antibody.
IL-1 beta is not present under homeostatic conditions; it is induced and secreted only upon inflammatory signals and its secretion is tightly controlled at the levels of transcription, mRNA stability, translation, post-translational modifications and processing (PMID: 26686225).



Immunoprecipitation - Anti-IL-1 beta antibody [EPR16805-15] (ab234437)

IL-1 beta was immunoprecipitated from 0.35 mg of RAW 264.7 (mouse macrophage cell line transformed with Abelson murine leukemia virus) (treated with 100 ng/ml LPS for 3h, then add 300 ng/ml Brefeldin A for 3h) whole cell lysate with ab234437 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab234437 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used as secondary antibody at 1/5000 dilution.
Lane 1: RAW 264.7 (treated with 100 ng/ml LPS for 3h, then add 300 ng/ml Brefeldin A for 3h) whole cell lysate 10 µg (Input).
Lane 2: ab234437 IP in RAW 264.7 (treated with 100 ng/ml LPS for 3h, then add 300 ng/ml Brefeldin A for 3h) whole cell lysate.
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab234437 in RAW 264.7 (treated with 100 ng/ml LPS for 3h, then add 300 ng/ml Brefeldin A for 3h) whole cell lysate.

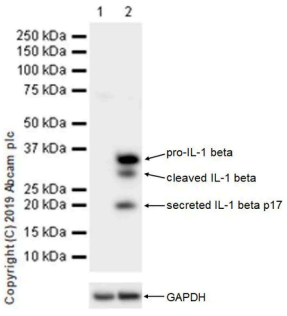
IL-1 beta is not present under homeostatic conditions; it is induced and secreted only upon inflammatory signals and its secretion is tightly controlled at the levels of transcription, mRNA stability, translation, post-translational modifications and processing (PMID: 26686225).

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Exposure time: 3 seconds.

All lanes:
Immunoprecipitation - Anti-IL-1 beta antibody [EPR16805-15] (ab234437)

Predicted band size: 30 kDa

Observed band size: 31 kDa



Western blot - Anti-IL-1 beta antibody [EPR16805-15] (ab234437)

IL-1 beta Western blot staining using rabbit Anti-IL-1 beta antibody

Blocking and dilution buffer: 5% NFDM/TBST.
The molecular weight observed is consistent with what has been described in the literature (PMID: 8446594).

IL-1 beta is not present under homeostatic conditions; it is induced and secreted only upon inflammatory signals and its secretion is tightly controlled at the levels of transcription, mRNA

stability, translation, post-translational modifications and processing (PMID: 26686225).
All lanes:
Western blot - Anti-IL-1 beta antibody [EPR16805-15] (ab234437) at 1/1000 dilution

Lane 1:
Untreated RAW 264.7 (mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 2:
RAW 264.7 (treated with 100 ng/ml lipopolysaccharide (LPS) for 6 hours, then with 300 ng/ml Brefeldin A (BFA) added after 3 hours) whole cell lysate at 10 µg

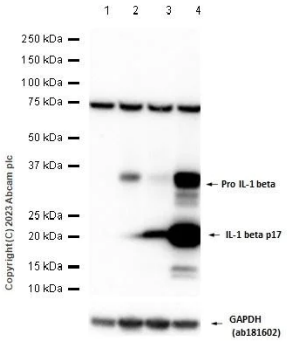
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 30 kDa

Observed band size: 17 kDa, 28 kDa, 31 kDa

Exposure time: 15s



Western blot - Anti-IL-1 beta antibody [EPR16805-15] (ab234437)

Blocking and dilution buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-IL-1 beta antibody [EPR16805-15] (ab234437) at 1/1000 dilution

Lanes 1 and 3:
Untreated NR8383 (rat lung macrophage (alveolar)) whole cell lysate at 20 µg

Lane 2:
NR8383 (rat lung macrophage (alveolar)) treated with 100ng/ml IFN gamma and 10ng TNF alpha for 32 hours, then with 5 µg/ml Brefeldin A (BFA) added for 6 hours whole cell lysate at 20 µg

Lane 4:
NR8383 (rat lung macrophage (alveolar)) treated with 100ng/ml LPS and 300ng /ml Brefeldin A (BFA) for 6 hours whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 20 kDa, 31 kDa

Exposure time: 40s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.