

Anti-IL-1 beta Antibody

Catalog Number: A00101-2

About IL1B

IL-1 beta (also known as Interleukin-1 beta, IL-1 β and catabolin) is produced by activated macrophages. IL-1 stimulates thymocyte proliferation by inducing IL-2 release, B-cell maturation and proliferation, and fibroblast growth factor activity. IL-1 proteins are involved in the inflammatory response, being identified as endogenous pyrogens, and are reported to stimulate the release of prostaglandin and collagenase from synovial cells. IL-1 β is a monomeric secreted protein that may be released by damaged cells or is secreted by a mechanism differing from that used for other secretory proteins.

Overview

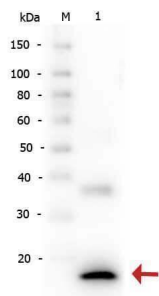
Product Name	Anti-IL-1 beta Antibody
Reactive Species	Human
Description	Boster Bio Anti-IL-1 beta Antibody (Catalog # A00101-2). Tested in ELISA, IHC, WB applications. This antibody reacts with Human.
Application	ELISA, Flow Cytometry, IP, IHC, WB
Clonality	Polyclonal
Formulation	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Storage Instructions	Store vial at -20°C prior to opening. Aliquot contents and freeze at -20°C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4°C as an undiluted liquid. Dilute only prior to immediate use. Expiration date is one (1) year from date of opening. (Ship on dry ice.)
Host	Rabbit
Uniprot ID	P01584

Technical Details

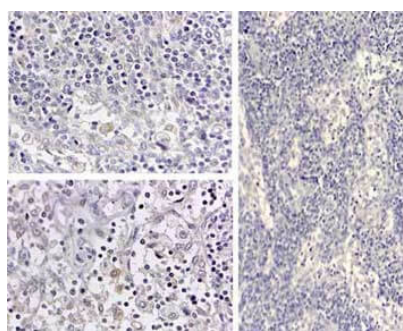
Immunogen	This antibody was prepared by repeated immunizations with recombinant human IL-1 β produced in E.coli. The MW of the recombinant 153 aa IL-1 β was 17 kDa with the N-terminal amino acid at position alanine 117. This cleavage site is generated by the IL-1 β converting enzyme (ICE, capase-1).
Predicted Reactive Species	Bovine, Goat, Guinea Pig, Hamster, Monkey, Sheep
Cross Reactivity	Detects ~20kDa. Does not cross-react with alphaB-crystallin, betaL-crystallin, β H-crystallin, gamma-crystallin, HSP25, HSP27 or HSP47 proteins.
Isotype	IgG
Form	Liquid (sterile filtered)

Concentration	2.0 mg/mL by UV absorbance at 280 nm
Purification	<p>This is an IgG preparation of whole rabbit serum purified by DEAE fractionation. This antibody is primarily directed against mature, 17,000 MW human IL-1β and is useful in determining its presence in various assays. In general, this antibody also detects primate IL-1β in the same formats using similar dilutions. The antiserum does not recognize human IL-1α. In ELISA formats and other immunoreactive assays, this antibody will recognize 10% of the non-denatured (native) precursor 31,000 MW IL-1β containing samples but will primarily detect all of the 17,000 MW mature molecule. However, in immunoblot analysis of natural cell products or human body fluids, the usual procedure of heating the sample in SDS with or without reducing agents will facilitate denaturing of the 31,000 MW IL-1β precursor molecule. Denatured 31,000 precursor IL-1β will be recognized by this antibody but often migrates as a 35,000 MW band. This is due to the unfolding of the denatured precursor IL-1β exposing epitopes not exposed in the natural state. In immunoblots, depending on the number of cells, the antibody detects the 17,000 MW band in supernatants as well as a 35,000 MW band representing the 31,000 MW IL-1β precursor in lysates.</p>
Suggested Dilutions	<p>ELISA: 1:500 - 1:2,000 Flow Cytometry: User optimized IHC: 1:100 - 1:200 IP: 1:400 - 1:800 WB: 1:1,000 Neutralization: 1:100</p> <p>Anti-Human IL-1β has been tested for use in ELISA, immunohistochemistry, immunoblotting. This antibody is suitable for neutralizations, radioimmunoassays, flow cytometry, and immunoprecipitation. It recognizes the 17,000 MW mature IL-1β. For immunoblots, typically, IL-1β is detected from supernatants or lysates of 2×10^6 endotoxin-stimulated peripheral blood mononuclear cells (PBMC). PBMC are stimulated for 24 hours with 1% (v/v) serum plus 10 ng/mL E.coli LPS. For immunoprecipitation pre-clearing the preparation with a non-specific Rabbit IgG (p/n 011-001-297) to reduce background is suggested. For immunohistochemistry either paraffin fixation or cryofixation can be used for sample preparation to stain intracellular IL-1β. For ELISA use HRP Conjugated Anti-Rabbit IgG [H&L] (Goat) (611-1302) for detection. In ELISA formats this antibody is best used as the second antibody in combination with a monoclonal antibody as a capture antibody. This antibody is also useful for neutralization of human and primate IL-1β activity in bioassays. It does not neutralize the biological activity IL-1α. It does not neutralize the biological activity of murine, rat or rabbit IL-1β. For neutralization, it is recommended to incubate the sample with a dilution of the antibody for at least 4 hours before being tested. A control of similarly diluted normal rabbit IgG is recommended. This antibody can be used for FACS analysis. Caution should be exhibited as the F(c) domain of the rabbit IgG molecule may interact with cells non-specifically.</p>

Anti-IL-1 beta Antibody (A00101-2) Images



Western Blot of Rabbit anti-Human IL-1 β antibody. Lane 1: Human IL-1 β . Load: 5 ng per lane. Primary antibody: Human IL-1 β antibody at 1:2,000 for overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody at 1:40,000 for 30 min at RT. Block: Blocking Buffer for Fluorescent Western Blotting for 30 min at RT. Predicted/Observed size: 17 kDa, 17 kDa for Human IL-1 β . Other band(s): Unspecific band at ~35 kDa.



Immunohistochemistry of Human IL1 beta antibody. Tissue: human medullary lymph node. Fixation: formalin fixed paraffin embedded. Antigen retrieval: user optimized. Primary antibody: Human IL1 beta antibody. Secondary antibody: Peroxidase goat anti-rabbit at 1:10,000 for 45 min at RT. Localization: cytoplasm. Staining: Close up of medullary lymph node: positive staining in the cytoplasm of circulating macrophages. Neg Ctr (far right) of normal rabbit IgG with pH 6.2 at 40X.

5 Publications Citing This Product

1. PubMed ID: 10.1007/s00221-008-1365-1, Interleukin-1beta of Red nucleus involved in the development of allodynia in spared nerve injury rats
2. PubMed ID: 22942709, Qin Q, Niu J, Wang Z, Xu W, Qiao Z, Gu Y. Int J Mol Sci. 2012;13(7):8379-87. Doi: 10.3390/Ijms13078379. Epub 2012 Jul 5. Astragalus Membranaceus Inhibits Inflammation Via Phospho-P38 Mitogen-Activated Protein Kinase (Mapk) And Nuclear Factor (Nf)...
3. PubMed ID: 25338658, Antenatal exposure of maternal secondhand smoke (SHS) increases fetal lung expression of RAGE and induces RAGE-mediated pulmonary inflammation

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