Datasheet for ABIN964782

anti-IL-1 beta antibody

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Overview

Quantity:	100 µg
Target:	IL-1 beta (IL1B)
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This IL-1 beta antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP), Flow Cytometry (FACS), Neutralization (Neut), Radioimmunoassay (RIA)

Product Details

Immunogen:	This antibody was prepared by repeated immunizations with recombinant mouse IL-1ß produced in E.coli. The MW of recombinant mouse IL-1ß was 17 kDa. Immunogen Type: RecombinantProtein
Isotype:	IgG
Specificity:	This is an IgG preparation of whole rabbit serum purified by DEAE fractionation. This antibody is primarily directed against mature, 17,000 MW mouse IL-1ß and is useful in determining its presence in various assays. The antibody does not recognize human IL-1ß or mouse IL-1alpha. In ELISA formats and other immunoreactive assays, reactivity occurs with rat IL-1ß. This antibody will recognize 10% of the non-denatured (native) precursor 31,000 MW mouse IL-1ß containing samples but will primarily detect all of the 17,000 MW mature molecule. However, in immunoblot analysis, the usual procedure of heating the sample in SDS with or without reducing agents will facilitate denaturing of the 31,000 MW IL- 1ß precursor molecule.

Product Details

	Denatured 31,000 precursor IL-1ß will be recognized by this antibody.
Cross-Reactivity:	Rat (Rattus)
Characteristics:	IL-1 beta (also known as Interleukin-1 beta, IL-1ß 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-1ß 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. Anti-IL-1 beta antibody is ideal for investigators involved in Cardiovascular and Immunology research.
Purification:	purified

Target Details

Target:	IL-1 beta (IL1B)
Alternative Name:	IL1 beta (IL1B Products)
Background:	IL-1 beta (also known as Interleukin-1 beta, IL-1ß 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-1ß 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. Anti-IL-1 beta antibody is ideal for investigators involved in Cardiovascular and Immunology research. Synonyms: IL-1 beta, Interleukin-1 beta, IL-1ß, catabolin
Gene ID:	16176
UniProt:	P10749
Pathways:	NF-kappaB Signaling, Interferon-gamma Pathway, TLR Signaling, Negative Regulation of Hormone Secretion, Cellular Response to Molecule of Bacterial Origin, Carbohydrate Homeostasis, Glycosaminoglycan Metabolic Process, Myometrial Relaxation and Contraction, Regulation of Leukocyte Mediated Immunity, Positive Regulation of Immune Effector Process, Autophagy, Cancer Immune Checkpoints, Inflammasome

Application Details

Application Notes:	Anti-Mouse IL-1ß has been tested for use in neutralizations, ELISA, radioimmunoassays, flow cytometry, immunohistochemistry, immunoblotting and immunoprecipitation. It recognizes the 17,000 MW mature IL-1ß. For immunoblots, typically, IL-1ß is detected from supernatants or lysates of 2 x 10E6 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-1ß. 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 mouse and rat IL-1ß activity in bioassays. It does not neutralize the biological activity IL-1α. It does not neutralize the biological activity of human or primate IL-1ß. 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.
Comment:	Gene Name: Il1b
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Reconstitution Buffer: Restore with deionized water (or equivalent), Reconstitution Volume: 100 µL
Concentration:	1.0 mg/mL
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	Without preservative
Storage:	4 °C/-20 °C
Storage Comment:	Store vial at 4 °C prior to restoration. For extended storage aliquot contents and freeze at -20 °C or below. 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 six (6) months from date of opening.

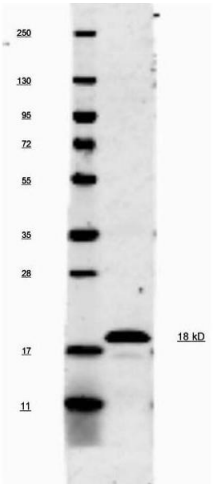
Handling

Expiry Date:	6 months

Publications

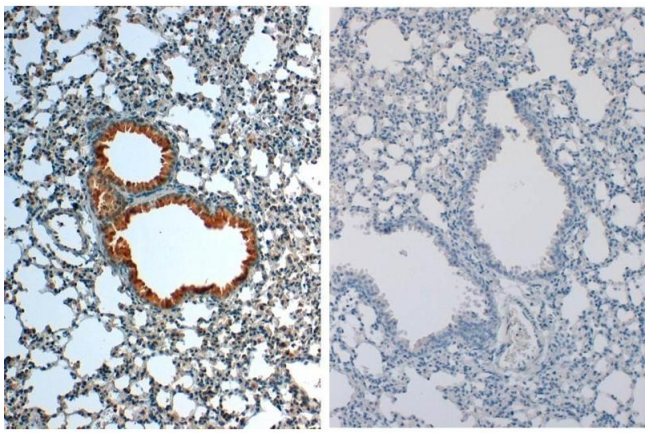
Product cited in:	Rawji, Young, Ghosh, Michaels, Mirzaei, Kappen, Kolehmainen, Alaeiilkhchi, Lozinski, Mishra, Pu, Tang, Zein, Kaushik, Keough, Plemel, Calvert, Knights, Gaffney, Tetzlaff, Franklin, Yong: "Niacin-mediated rejuvenation of macrophage/microglia enhances remyelination of the aging central nervous system." in: **Acta neuropathologica**, Vol. 139, Issue 5, pp. 893-909, (2020) (PubMed). Bouvier, Jones, Quesseveur, Davoli, A Ferreira, Quirion, Mechawar, Murai: "High Resolution Dissection of Reactive Glial Nets in Alzheimer's Disease." in: **Scientific reports**, Vol. 6, pp. 24544 , (2017) (PubMed).

Images



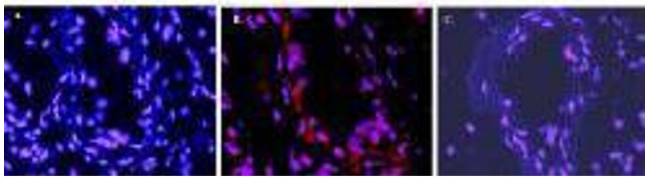
Western Blotting

Image 1. This antibody will recognize 10% of the non-denatured (native) precursor 31,000 MW mouse IL-1ß containing samples but will primarily detect all of the 17,000 MW mature molecule. However, in western blot analysis, the usual procedure of heating the sample in SDS with or without reducing agents will facilitate denaturing of the 31,000 MW IL- 1ß precursor molecule. Denatured IL-1ß will have a 18 kDa band.



Immunohistochemistry

Image 2. Immunohistochemistry of Rabbit anti-IL1Beta Antibody in Mouse Embryonic Kidney Tissue: Mouse Embryonic Kidney Fixation: FFPE buffered formalin 10% conc Ag Retrieval: Heat, Citrate pH 6.2. Pressure Cooker Primary antibody: 2ug/ml 1.5 hour @ room T Secondary Ab: MACH 1 HRP POLYMER 1:50 45” RT



Immunofluorescence

Image 3. Immunofluorescence microscopy after staining of mouse carotid artery tissue with anti-Mouse IL-1ß antiserum (less purified form of) diluted 1:50. Tissue sections were prepared after cyrofixation. Reaction occurred at room temperature for 60' followed by washes and reaction with Rhodamine conjugated Gt-a-Rabbit IgG (code 611-100-122). Tissue was counterstained with bis-benzimide solution at 0.5 mg/ml in PBS for 15 min at room temperature. Panel A) shows no antibody staining of WT uninjured mouse carotid tissue. Panel B) shows anti-IL-1ß staining of cells after surgical injury of tissue. Panel C) shows no antibody staining of injured carotid tissue from an IL-1ß KO mouse.