

## Biotin anti-human IL-1 $\beta$ Antibody

<b>Catalog# / Size</b>	511703 / 50 $\mu$ g 511704 / 500 $\mu$ g
<b>Clone</b>	H1b-98
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Interleukin-1 $\beta$ , H1, OAF, Catabolin, IFN $\beta$ -inducing factor(il-1 $\beta$ ,il1 $\beta$ )
<b>Isotype</b>	Mouse IgG2b, $\kappa$
<b>Description</b>	IL-1 refers to two proteins, IL-1 $\alpha$ and IL-1 $\beta$ which are the products of distinct genes, but which are recognized by the same cell surface receptors. IL-1 $\beta$ is a potent immuno-modulator which mediates a wide range of immune and inflammatory responses including the activation of B and T cells.

### Product Details

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<b>Verified Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions.
<b>Concentration</b>	0.5 mg/mL
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ELISA Detection</a> , <a href="#">ELISPOT Detection</a> - <a href="#">Quality tested ICC - Verified</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">ELISA assay</a> . Clone H1b-98 is useful as the detection antibody in a sandwich ELISA when used in conjunction with the purified H1b-27 antibody (Cat. No. 511601 or 511604). For ELISA detection applications, a concentration range of 1.0 - 4.0 $\mu$ g/mL is recommended. To obtain a linear standard curve, serial dilutions of IL-1 $\beta$ recombinant protein ranging from 2000 to 31.3 pg/mL are recommended for each ELISA plate. For use as an ELISPOT detection antibody, a concentration range of 2.0 - 8.0 $\mu$ g/mL is recommended. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Product Citations</b>	<ol style="list-style-type: none"><li>Haug V, <i>et al.</i> 2020. Transplantation. e260:104. <a href="#">PubMed</a></li><li>Croden J, <i>et al.</i> 2021. PLoS One. 16:e0258208. <a href="#">PubMed</a></li><li>Bando H, <i>et al.</i> 2019. Front Cell Infect Microbiol. 9:140. <a href="#">PubMed</a></li><li>Hoffmann J, <i>et al.</i> 2021. Nat Commun. 12:3964. <a href="#">PubMed</a></li><li>Watkins H, <i>et al.</i> 2017. Mol Ther. 10.1016/j.ymthe.2017.01.010. <a href="#">PubMed</a></li></ol>
<b>RRID</b>	AB_1236448 (BioLegend Cat. No. 511703) AB_1236449 (BioLegend Cat. No. 511704)

### Antigen Details

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<b>Structure</b>	Cytokine; 17.3 kD (Mammalian)
<b>Bioactivity</b>	Stimulates T cells, B cells, proliferation/activation of NK cells, fibroblasts, thymocytes, glioblastoma cells, astroglia, microglia
<b>Cell Sources</b>	Monocytes, tissue macrophages, Langerhans cells, dendritic cells, T and B cells, natural killer (NK) cells, large granular lymphocytes (LGL), vascular endothelium, smooth muscle, fibroblasts,

thymic epithelia, astrocytes, microglia, glioma, keratinocytes,

**Cell Targets**

B cells, T cells, monocytes

**Receptors**

Type I IL-1R (CDw121a), Type II IL-1R (CDw121b)

**Biology Area**

Cell Biology, Immunology, Innate Immunity, Neuroinflammation, Neuroscience

**Molecular Family**

Cytokines/Chemokines

**Antigen References**

1. Fitzgerald K, *et al.* Eds. 2001. *The Cytokine FactsBook*. Academic Press San Diego.
2. Bomford R, *et al.* Eds. 1989. *Interleukin-1 inflammation and disease*. Elsevier New York.
3. Brazel D, *et al.* 1991. *Biotechnol. Ther.* 2:241.
4. Dinarello C. 1996. *Blood* 87:2095.

**Regulation**

Upregulated by TNF- $\alpha$ , IFN- $\alpha$ , IFN- $\beta$ , IFN- $\gamma$ , bacterial endotoxins, viruses, mitogens, antigens; downregulated by IL-6, lipoproteins, lipids, and  $\alpha$ 2-macroglobulin

**Gene ID**

[3553](#)

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**Related Protocols**

[Active Protocols: Sandwich ELISA - Video](#)

[Sandwich ELISA Protocol](#)

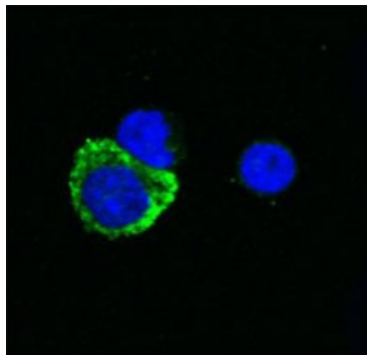
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**Other Formats**

Biotin anti-human IL-1 $\beta$ , FITC anti-human IL-1 $\beta$ , Alexa Fluor<sup>®</sup> 647 anti-human IL-1 $\beta$ , Pacific Blue<sup>™</sup> anti-human IL-1 $\beta$

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**Product Data**



Human PBMCs, stimulated with 1  $\mu$ g/ml of LPS for 8 h and treated with Brefeldin A during the last 4 h, were prepared by cytopsin, fixed and permeabilized on a slide and then treated with endogenous biotin blocking kit (Vector labs). Slides were stained with anti-human IL-1 $\beta$  biotin (clone H1b-98) and DyLight<sup>™</sup> 649 streptavidin (green) and counterstained with DAPI (blue). Images were acquired with an Olympus FV10i confocal microscope. Images courtesy of Teresa Rodriguez, Darius Schneider, and Matthias von Herrath, LaJolla Institute for Allergy and Immunology.

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