

## Recombinant Mouse IL-1 $\beta$ (ELISA Std.)

<b>Catalog# / Size</b>	575109 / 4 pack
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Interleukin-1 $\beta$ , Catabolin, Hematopoietin-1 (H1), IFN $\beta$ -inducing factor, Interleukin- $\beta$ , Osteoclast activating factor (OAF)
<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. The B122 antibody reacts with the precursor and mature secreted forms of mouse IL-1 $\beta$ . This antibody also recognizes rat IL-1 $\beta$ . The B122 antibody can neutralize the bioactivity of natural or recombinant IL-1 $\beta$ .

### Product Details

---

<b>Source</b>	Mouse IL-1 $\beta$ , amino acids Val118-Ser269 (Accession # NM_008361) was expressed in <i>E. coli</i> , approximately 17 kD.
<b>Formulation</b>	Lyophilized in sterile-filtered PBS, pH 7.2, containing 1% BSA, 0.09% sodium azide, and protease inhibitors.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	Upon receipt, store unopened vials between 2°C and 8°C immediately and use within 12 months from date of receipt. Prior to use, reconstitute the lyophilized powder with 0.2 ml of PBS containing a carrier protein (e.g., 1% BSA, protease free), pH7.4. Re-cap vial, vortex. Allow the reconstituted standard to sit at room temperature for 15 minutes, vortex again to mix completely. The reconstituted standard stock solution can be aliquoted into polypropylene vials and stored at -70°C for up to one month. Do not re-use diluted standards. Use a manual defrost freezer and avoid repeated freeze thaw cycles.
<b>Application</b>	<a href="#">ELISA</a>
<b>Recommended Usage</b>	Each lot of this protein is quality control tested by <a href="#">ELISA assay</a> . For use as an ELISA standard, a standard curve comprised of doubling dilutions from 2000 pg/ml to 31.3 pg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	This IL-1 $\beta$ protein is useful as a standard for a mouse IL-1 $\beta$ sandwich ELISA, using unlabeled B122 antibody (Cat. No. 503502) for capture and biotinylated Poly5158 antibody (Cat. No. 515801) for detection.
<b>Product Citations</b>	<ol style="list-style-type: none"><li>Rissiek B, <i>et al.</i> 2017. Sci Rep. . 10.1038/s41598-017-16613-w. <a href="#">PubMed</a></li><li>Pahari S, <i>et al.</i> 2020. Autophagy. 1.375694444. <a href="#">PubMed</a></li></ol>

### Antigen Details

---

<b>Structure</b>	Cytokine; 17.5 kD (Mammalian)
<b>Bioactivity</b>	Stimulates T cells, B cells, proliferation/activation of NK cells, fibroblasts, thymocytes, glioblastoma cells, astroglia, microglia; monocyte transition from IL-1 $\beta$ to IL-1 $\alpha$ when matured to macrophages
<b>Cell Sources</b>	Monocytes, tissue macrophages, Langerhan cells, dendritic cells, T lymphocytes, B lymphocytes, natural killer (NK) cells, large granular lymphocytes (LGL), vascular endothelium, smooth muscle, fibroblasts, thymic epithelia, astrocytes, microglia, glioma,
<b>Cell Targets</b>	B cells, T cells, monocytes
<b>Receptors</b>	Type I IL-1R (CDw121a), Type II IL-1R (CDw121b)

<b>Biology Area</b>	Cell Biology, Immunology, Innate Immunity, Neuroinflammation, Neuroscience
<b>Molecular Family</b>	Cytokines/Chemokines
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Fitzgerald K, <i>et al.</i> Eds. 2001. <i>The Cytokine FactsBook</i>. Academic Press San Diego.</li><li>2. Bomford R, <i>et al.</i> Eds. 1989. <i>Interleukin-1 inflammation and disease</i>. Elsevier New York.</li><li>3. Brazel D, <i>et al.</i> 1991. <i>Biotechnol. Ther.</i> 2:241.</li><li>4. Dinarello C. 1996. <i>Blood</i> 87:2095.</li></ol>
<b>Regulation</b>	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
<b>Gene ID</b>	<a href="#">16176</a>

## Related Protocols

---

[Sandwich ELISA Protocol](#)

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

\*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, [www.biolegend.com/ordering#license](http://www.biolegend.com/ordering#license)). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 [www.biolegend.com](http://www.biolegend.com)  
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587