

## IL-1beta, human recombinant

### Information

<b>Gene ID</b>	3553
<b>Accession #</b>	P01584
<b>Alternate Names</b>	Catabolin, Leukocyte Endogenous Mediator, LEM, Lymphocyte-activating factor, LAF, Mononuclear Cell Factor, MCF, Endogenous Pyrogen, EP
<b>Source</b>	<i>Escherichia coli</i> .
<b>M.Wt</b>	Approximately 17.3 kDa, a single non-glycosylated polypeptide chain containing 153 amino acids.
<b>AA Sequence</b>	APVRSLNCTL RDSQQKSLVM SGPYELKALH LQGQDMEQQV VFMSMFVQGE ESNDKIPVAL GLKEKNLYLS CVLKDDKPTL QLESVDPKNY PKKKMEKRFV FNKIEINNKL EFESAQFPNW YISTSQAENM PVFLGGTKGG QDITDFTMQF VSS
<b>Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70 °C as supplied. - 1 month, 2 to 8 °C under sterile conditions after reconstitution. - 3 months, -20 to -70 °C under sterile conditions after reconstitution.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cell proliferation assay using murine D10S cells is less than 1.0 pg/ml, corresponding to a specific activity of > 1.0 × 10 <sup>9</sup> IU/mg.
<b>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	10 µg	100 µg	500 µg
IL-1beta, human recombinant	10 µg	100 µg	500 µg

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## Quality Control

Purity	> 97 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/ $\mu$ g of rHuIL-1 $\beta$ as determined by LAL method.

## Description

Interleukin-1 beta (IL-1 $\beta$ ) is a non-secreted proinflammatory cytokine produced mainly by activated macrophages, as well as neutrophils, epithelial cells, and endothelial cells. It possesses metabolic, physiological, haematopoietic activities, and plays one of the central roles in the regulation of the immune responses. Both IL-1 $\alpha$  and IL-1 $\beta$  binds to the same receptor and has similar but not identical biological properties. The mature human IL1 $\beta$  shares 96 % amino acid sequence identity with rhesus and 67 % -78 % with canine, mouse and rat IL-1 $\beta$ .

## Reference

1. Bankers-Fulbright, J.L., K.R. Kalli, and D.J. McKean. 1996. Life Sci, 59: 61-83.
2. Dinarello, C.A. 1997. Semin Oncol, 24: S9-81-S9-93.
3. Martinon, F., and J. Tschopp. 2007. Cell Death Differ, 14: 10-22.
4. Auron, P.E., A.C. Webb, L.J. Rosenwasser, et al. 1984. Proc Natl Acad Sci U S A, 81: 7907-11.

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