

## Recombinant Rhesus Macaque Interleukin-1 beta

### Information

<b>Gene ID</b>	704701
<b>Accession #</b>	P48090
<b>Alternate Names</b>	Catabolin, Leukocyte Endogenous Mediator, LEM, Lymphocyte-activating factor, LAF, Mononuclear Cell Factor, MCF, Endogenous Pyrogen, EP
<b>Source</b>	Escherichia coli.
<b>M.Wt</b>	Approximately 17.3 kDa, a single non-glycosylated polypeptide chain containing 153 amino acids.
<b>AA Sequence</b>	APVRS <del>L</del> HCTL RDAQ <del>L</del> KSLVM SGPYELKALH LQGQDLEQQV VFSMSFVQGE ESNDKIPVAL GLKAKNLYLS CVLKDDKPTL QLESVDPKNY P <del>K</del> KKMEKRFV FNKIEINNKL EFESAQFPNW YISTSQAENM PVFLGGTRGG 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 as determined by a cell proliferation assay using murine D10.G4.1 cells is less than 10 pg/ml, corresponding to a specific activity of > 1.0 × 10 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	10µg	100µg	500µg
Recombinant Rhesus Macaque Interleukin-1 beta	10µg	100µg	500µg

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- 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

## Quality Control

Purity	> 98 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/ $\mu$ g of rRhIL-1 $\beta$ as determined by LAL method.

## Description

Interleukin-1beta (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 if not identical biological properties. These cytokines have a broad range of activities including, stimulation of thymocyte proliferation, by inducing IL-2 release, B-cell maturation and proliferation, mitogenic FGF-like activity and the ability to stimulate the release of prostaglandin and collagenase from synovial cells. The mature Rhesus macaque IL1  $\beta$  shares 96% amino acid sequence identity with rhesus and 67% -78% with canine, mouse and rat IL1  $\beta$  .

## 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. Villinger, F., S.S. Brar, A. Mayne, et al. 1995. J Immunol, 155: 3946-54.

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