

Recombinant Human Interleukin-1 alpha

#R00033

Size: 10 µg/100 µg/500 µg

Stability & Storage

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.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Interleukin-1 alpha (IL-1 α) 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 α and IL-1 β binds to the same receptor and has similar identical biological properties. Among various species, the amino acid sequence of mature IL-1 α is conserved 60 % to 70 % and human IL-1 has been found to be biologically active on murine cell lines. IL-1 α recently started to find effective application in cosmetic and dermatological formulations, which allow to significantly harmonizing derma architecture.

AA Sequence

SAPFSFLSNVKYNFMRIIKYEFILNDALNQSIIRANDQY

LTAAALHNLDEAVKFDMGAYKSSKDDAKITVILRISK
QLYVTAQDEDQPVLLKEMPEIPKTTITGSETNLLFFWET
HGTKNYFTSVAHPNLFIA TKQDYWVCLAGGPPSITDF
QILENQA

Reconstitution

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 $\leq$ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms	Lymphocyte-activating factor, LAF, Leukocyte Endogenous Mediator, LEM, Endogenous Pyrogen, EP, Mononuclear Cell Factor, MCF , Hematopoietin-1
Accession	P01583
GeneID	3552
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 18.0 kDa, a single non-glycosylated polypeptide chain containing 159 amino acids.
Purity	> 97 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell

proliferation assay using murine D10S cells is less than 1.0 pg/ml, corresponding to a specific activity of $> 1.0 \times 10^9$ IU/mg.

Physical Appearance Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.

Endotoxin Less than 1.0 EU/ μg of rHuIL-1 α as determined by LAL method.
