Datasheet

Cat. No. P1425

Recombinant Human Interleukin-1 alpha GMP

Information

Gene ID	3552
Accession #	P01583
Alternate Names	Lymphocyte-activating factor, LAF, Leukocyte Endogenous Mediator, LEM, Endogenous Pyrogen, EP, Mononuclear Cell Factor, MCF, Hematopoietin-1
Source	Escherichia coli.
M.Wt	Approximately 18.0 kDa, a single non-glycosylated polypeptide chain containing 159 amino acids.
AA Sequence	SAPFSFLSNV KYNFMRIIKY EFILNDALNQ SIIRANDQYL TAAALHNLDE AVKFDMGAYK SSKDDAKITV ILRISKTQLY VTAQDEDQPV LLKEMPEIPK TITGSETNLL FFWETHGTKN YFTSVAHPNL FIATKQDYWV CLAGGPPSIT DFQILENQA
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles A minimum of 12 months when stored at ≤ -20 °C as supplied Refer to lot specific COA for the Use by Date 1 month, 2 to 8 °C under sterile conditions after reconstitution 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 25 mM Tris-HCl, 3 mM Mercaptoethanol and 5 % Trehalose, pH8.0.
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 ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED 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 IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	5μg	100μg	
Recombinant Human Interleukin-1 alpha GMP	5μg	100μg	

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Quality Control

Purity	> 98 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 0.01 EU/μg of rHuIL-1α GMP as determined by LAL method.

Description

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

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.

APExBIO Technology
www.apexbt.com
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com