

## GFH173AF Recombinant Human IL-1 $\alpha$ (Animal-Free)

### Description

Interleukin-1  $\alpha$  (IL-1  $\alpha$ ) is expressed by epithelial cells, activated macrophages, neutrophils, and endothelial cells to regulate immune responses. IL-1  $\alpha$  signals through the IL-1 receptor, type 1 (IL-1R1) to activate the myeloid differentiation primary response 88 (MYD88) signaling pathway, which contains the cytoplasmic Toll/IL-1 receptor (TIR) domain adapter. IL-1  $\alpha$  and the independently regulated IL-1  $\beta$  protein have overlapping proinflammatory activities to induce adhesion molecule expression on epithelial cells, control fever induction, initiate rheumatoid arthritis, and promote septic shock.

This product is produced with no animal derived raw products. All processing and handling employs animal-free equipment and animal-free protocols.

<b>Length</b>	159 aa
<b>Molecular Weight</b>	18 kDa
<b>Source</b>	E. coli
<b>Accession Number</b>	P01583
<b>Purity</b>	≥95% determined by reducing and non-reducing SDS-PAGE

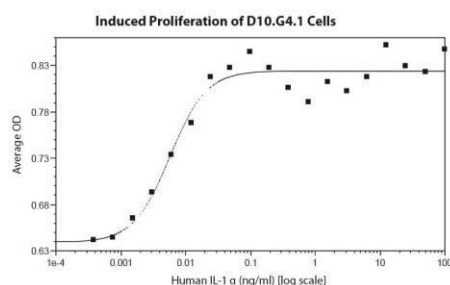
### Specifications

<b>Alternative Names</b>	Interleukin-1 $\alpha$ , IL-1F1, IL1, FAF, BAF, LEM, LAF
<b>Biological Activity</b>	Human IL-1 $\alpha$ is fully biologically active when compared to standard. The activity is determined by the ability to induce D10.G4.1 cells proliferation.
<b>Endotoxin Level</b>	≤1.00 EU/ $\mu$ g as measured by kinetic LAL
<b>Formulation</b>	Lyophilized from a sterile (0.2 micron) filtered aqueous solution containing 10 mM sodium phosphate, pH 7.5
<b>AA Sequence</b>	SAPFSFLSNV KYNFMRIIKY EFILNDALNQ SIIRANDQYL TAAALHNLDE AVKFDMGAYK SSKDDAKITV ILRISKTQLY VTAQDEDQPV LLKEMPEIPK TITGSETNLL FFWETHGTKN YFTSVAHPNL FIATKQDYWV CLAGGPSIT DFQILENQA

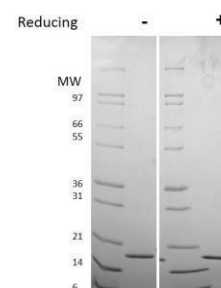
### Preparation and Storage

<b>Reconstitution</b>	Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at 0.1 mg/ml, which can be further diluted into other aqueous solutions.
<b>Stability and Storage</b>	12 months from date of receipt when stored at -20°C to -80°C as supplied. 1 month when stored at 4°C after reconstituting as directed. 3 months when stored at -20°C to -80°C after reconstituting as directed.

### Data



Induced proliferation of D10.G4.1 cells assay for Human IL-1  $\alpha$ . Cell proliferation was measured to calculate the ED50, which is as expected in the range of pg/ml.



Non-reducing (-) and reducing (+) conditions in a 4 - 20% Tris-Glycine gel stained with Coomassie Blue. 1  $\mu$ g of protein was loaded in each lane. Human IL-1  $\alpha$  has a predicted Mw of 18 kDa.