

## GFH167AF Recombinant Human IL-1 $\beta$ (Animal-Free)

### Description

Interleukin-1  $\beta$  (IL-1  $\beta$ ) is a pro-inflammatory cytokine that is produced by monocytes, macrophages, and dendritic cells (DCs). IL-1  $\beta$  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  $\beta$  and the independently regulated IL-1  $\alpha$  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>	154 aa
<b>Molecular Weight</b>	17.5 kDa
<b>Source</b>	E. coli
<b>Accession Number</b>	P01584
<b>Purity</b>	$\geq$ 95% determined by reducing and non-reducing SDS-PAGE

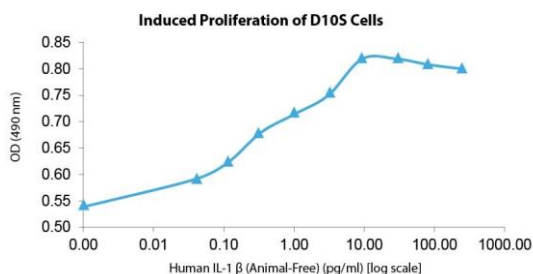
### Specifications

<b>Alternative Names</b>	Interleukin-1 $\beta$ , preinterleukin 1 $\beta$ , IL1, IL 1, catabolin, LAF, EP, LEM, MCF
<b>Biological Activity</b>	Human IL-1 $\beta$ (Animal-Free) is fully biologically active when compared to standard. The activity is determined by the ability to induce D10S cells proliferation and it is typically less than 12 pg/ml. This corresponds to an expected specific activity of $8.3 \times 10^7$ units/mg.
<b>Endotoxin Level</b>	$\leq$ 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>	MAPVRSLNCT LRDSQQKSLV MSGPYELKAL HLQGQDMEQQ VVFSMSFVQG EESNDKIPVA LGLKEKNLYL SCVLKDDKPT LQLESVDPKN YPKKKMEKRF VFNKIEINN K L EFESAQFPN WYISTSQAEN MPVFLGGTKG QDITDFTMQ FVSS

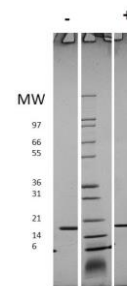
### Preparation and Storage

<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 $-20^{\circ}\text{C}$ to $-80^{\circ}\text{C}$ as supplied. 1 month when stored at $4^{\circ}\text{C}$ after reconstituting as directed. 3 months when stored at $-20^{\circ}\text{C}$ to $-80^{\circ}\text{C}$ after reconstituting as directed.

### Data



Induced proliferation of D10S cells assay for Human IL-1  $\beta$ . Cell proliferation was measured to calculate the ED50, which is as expected less than 12 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  $\beta$  has a predicted Mw of 17.5 kDa.