

GFH167 Recombinant Human IL-1 β

Description

Interleukin-1 β (IL-1 β) is a pro-inflammatory cytokine that is produced by monocytes, macrophages, and dendritic cells (DCs). IL-1 β 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 β and the independently regulated IL-1 α protein have overlapping proinflammatory activities to induce adhesion molecule expression on epithelial cells, control fever induction, initiate rheumatoid arthritis, and promote septic shock.

Length	154 aa
Molecular Weight	17.5 kDa
Source	E. coli
Accession Number	P01584
Purity	$\geq 95\%$ determined by reducing and non-reducing SDS-PAGE

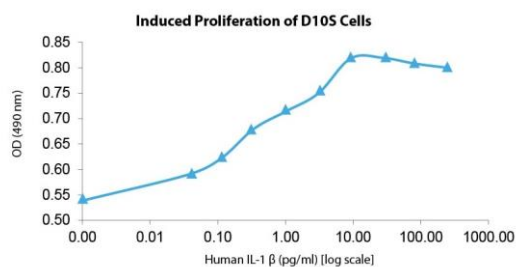
Specifications

Alternative Names	Interleukin-1 β , preinterleukin 1 β , IL1, IL 1, catabolin, LAF, EP, LEM, MCF
Biological Activity	Human IL-1 β 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 $\mu\text{g/ml}$. This corresponds to an expected specific activity of 8.3×10^7 units/mg.
Endotoxin Level	≤ 1.00 EU/ μg as measured by kinetic LAL
Formulation	Lyophilized from a sterile (0.2 micron) filtered aqueous solution containing 10 mM sodium phosphate, pH 7.5
AA Sequence	MAPVRSLNCT LRDSQQKSLV MSGPYELKAL HLQGQDMEQQ VVFSMSFVQG EESNDKIPVA LGLKEKNLYL SCVLKDDKPT LQLESVDPKN YPKKKMEKRF VFNKIEINN K LEFESAQFPN WYISTSQAEN MPVFLGGTKG GQDITDFTMQ FVSS

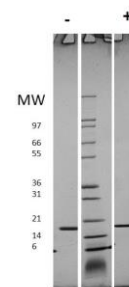
Preparation and Storage

Reconstitution	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.
Stability and Storage	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 D10S cells assay for Human IL-1 β . Cell proliferation was measured to calculate the ED50, which is as expected less than 12 $\mu\text{g/ml}$.



Non-reducing (-) and reducing (+) conditions in a 4 - 20% Tris-Glycine gel stained with Coomassie Blue. 1 μg of protein was loaded in each lane. Human IL-1 β has a predicted Mw of 17.5 kDa.