

Human IL-1 beta Protein; His Tag

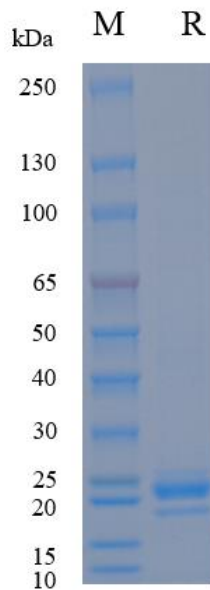
Product Information

Product Name	Human IL-1 beta Protein; His Tag
Storage temp	Store at $\leq -70^{\circ}\text{C}$, stable for 6 months after receipt. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.
Catalog# / Size	GM-88248RP-100 / 100 μg GM-88248RP-1000 / 1 mg

Protein Information

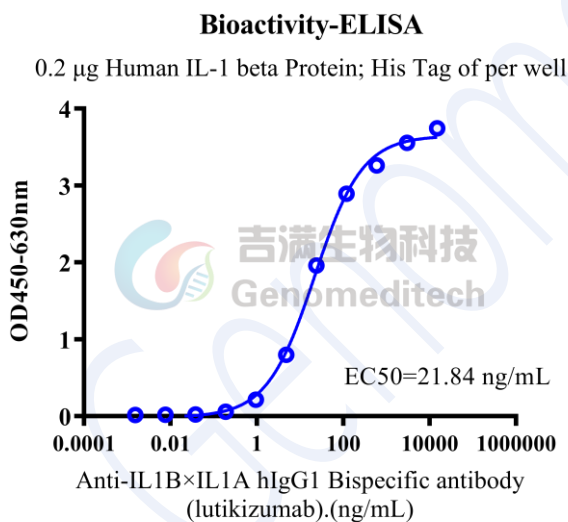
Alternative Names	IL1B, IL-1BETA, IL1F2, IL-1 β
Source	Human IL-1 beta Protein; His Tag (GM-88248RP) is expressed from human 293 cells (HEK-293). It contains AA Ala 117 - Ser 269 (Accession # P01584-1). This protein carries a His tag at the N-terminus.
Purity	> 95% as determined by SDS-PAGE
Endotoxin	< 1 EU/ μg , determined by LAL gel clotting assay
Predicted Mol Mass	18.6 KDa
Formulation	Supplied as a 0.2 μm filtered solution of PBS, pH7.2-7.4.
Description	The IL-1 family includes IL-1α (IL1A) and IL-1β (IL1B), both of which are important pro-inflammatory cytokines. IL-1α is typically matured intracellularly and can exist in membrane-bound or cytosolic forms; upon damage or stress, it is released and initiates inflammatory signaling via the IL-1R1/IL-1RAcP complex. IL-1β is secreted after processing by inflammasomes (e.g., NLRP3) that cleave the precursor, forming a classic paracrine signal. Both activate downstream pathways through the IL-1R1/IL-1RAcP axis, promoting the expression of pro-inflammatory genes such as IL-6, IL-8, and TNF-α, participating in inflammation, immune cell recruitment, and tissue repair; however, their sources, processing, and release mechanisms differ significantly. The amplification of IL-1 signaling mainly occurs through a MyD88-dependent cascade, activating the IKK/NF-κB and MAPK pathways (including p38, ERK, and JNK), rapidly promoting transcription and post-transcriptional regulation. In addition to paracrine spread, IL-1α/β can also be released into the cytosol under stress and directly interact with receptors on neighboring cells, shaping a localized inflammatory microenvironment.

SDS-PAGE



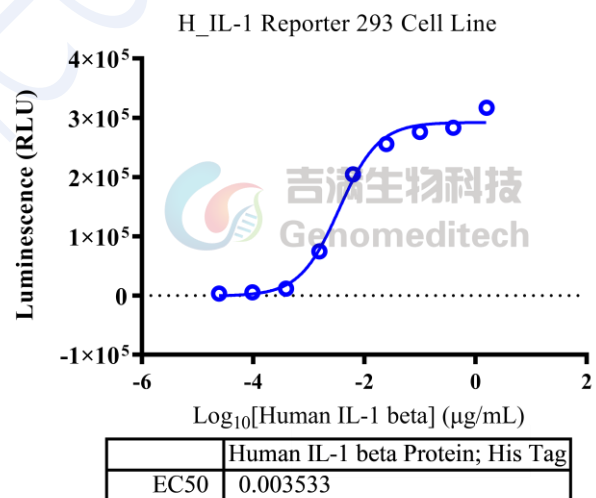
On SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



Human IL-1 beta Protein; His Tag (Catalog # GM-88248RP) was immobilized at 2 µg/ml (100 µL/well). Increasing concentrations of Anti-IL1B×IL1A hIgG1 Bispecific antibody (lutikizumab) (Catalog # GM-88265AB) were added.

Bioactivity-CELL BASE



Human IL-1 beta Protein; His Tag (Catalog # GM-88248RP) was added into H_IL-1 Reporter 293 Cell Line (Catalog # GM-C26463) and stimulates related signals.