

# Biotinylated Human IL-1 beta Protein; His-Avi Tag

## Product Information

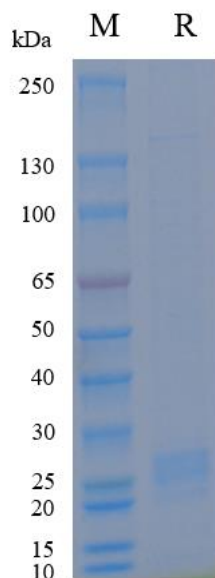
|                 |                                                                                                                                                                                               |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name    | Biotinylated Human IL-1 beta Protein; His-Avi Tag                                                                                                                                             |
| Storage temp    | Store at $\leq -70^{\circ}\text{C}$ , stable for 6 months after receipt.<br>Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles. |
| Catalog# / Size | GM-88336RP-25 / 25 $\mu\text{g}$<br>GM-88336RP-200 / 200 $\mu\text{g}$                                                                                                                        |

## Protein Information

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|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alternative Names  | IL1B, IL-1BETA, IL1F2, IL-1 $\beta$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Source             | Biotinylated Human IL-1 beta Protein; His-Avi Tag (GM-88336RP) is expressed from human 293 cells (HEK-293). It contains AA Ala 117 - Ser 269 (Accession # P01584-1).<br>This protein carries a His-Avi tag at the N-terminus.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Purity             | > 90% as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Endotoxin          | < 1 EU/ $\mu\text{g}$ , determined by LAL gel clotting assay                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Predicted Mol Mass | 20.0 KDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Formulation        | Supplied as a 0.2 $\mu\text{m}$ filtered solution of PBS, pH7.2-7.4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Description        | <p>The IL-1 family includes IL-1<math>\alpha</math> (IL1A) and IL-1<math>\beta</math> (IL1B), both of which are important pro-inflammatory cytokines. IL-1<math>\alpha</math> 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-1<math>\beta</math> 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-<math>\alpha</math>, participating in inflammation, immune cell recruitment, and tissue repair; however, their sources, processing, and release mechanisms differ significantly.</p> <p>The amplification of IL-1 signaling mainly occurs through a MyD88-dependent cascade, activating the IKK/NF-<math>\kappa\text{B}</math> and MAPK pathways (including p38, ERK, and JNK), rapidly promoting transcription and post-transcriptional regulation. In addition to paracrine spread, IL-1<math>\alpha/\beta</math> can also be released into the cytosol under stress and directly interact with receptors on neighboring cells, shaping a localized inflammatory microenvironment.</p> |

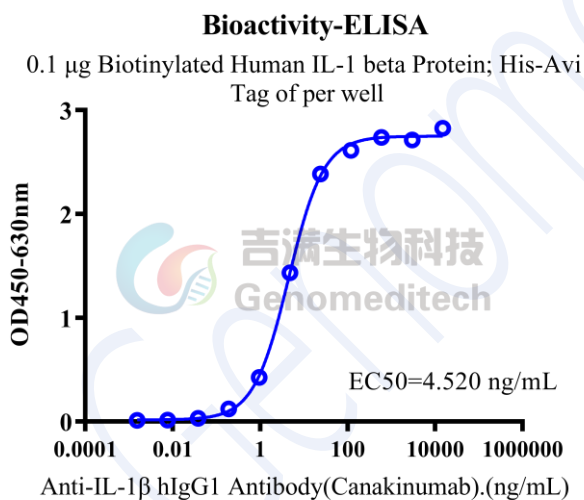
Version:4.0

## SDS-PAGE

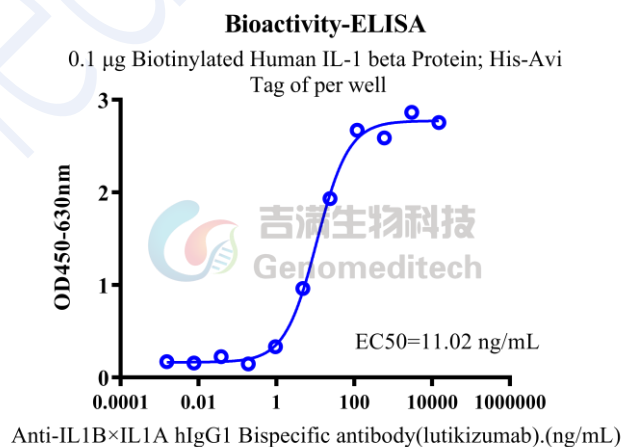


On SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

## Bioactivity-ELISA



Biotinylated Human IL-1 beta Protein; His-Avi Tag (Catalog # GM-88336RP) was immobilized at 1  $\mu$ g/ml (100  $\mu$ L/well) on streptavidin precoated. Increasing concentrations of Anti-IL-1 $\beta$  hIgG1 Antibody(Canakinumab) (Catalog # GM-51764AB) were added.



Biotinylated Human IL-1 beta Protein; His-Avi Tag (Catalog # GM-88336RP) was immobilized at 1  $\mu$ g/ml (100  $\mu$ L/well) on streptavidin precoated. Increasing concentrations of Anti-IL1B $\times$ IL1A hIgG1 Bispecific antibody(lutikizumab) (Catalog # GM-88265AB) were added.