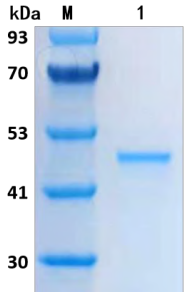
Human Interleukin 1β (IL-1β) Protein, Recombinant

I. For sale

Product name	Catalog #	Size
Human Interleukin 1β (IL-1β) Protein, Recombinant	P01I0053	10ug
		50ug
		100ug
		1mg

II. Product Description

Other Names	IL-1; IL1F2; IL1beta; IL1-BETA
Protein & NCBI Number	P01584, NM_000576.3
Host	E.coli
Express Region	1-269aa
Protein Length	Total length of the protein（including Tag）
Protein Sequence	MAEVPELASEMMAYYSGNEDDLFFEADGPKQMKCSFQDLDLCPLDGGIQLRISDHHYSKGF RQAASVVVAMDKLRKMLVPCPQTFQENDLSTFFPFIFEEEPIFFDTWDNEAYVHDAPVRSLN CTLRDSQQKSLVMSGPYELKALHLQGQDMEQQVVFSMSFVQGEESNDKIPVALGLKEKNLY LSCVLKDDKPTLQLESVDPKNYPKKKMEKRFVFNKIEINNKLEFESAQFPNWYISTSQAENMP VFLGGTKGGQDITDFTMQFVSS
Molecular Weight	about 30.7kDa
Fusion Tag	6×His-SUMO (N-terminus)
Purity	≥95% SDS-PAGE
Physical Property	liquid or lyophilized powder
Reconstitution	Storage solution: We recommend using PBS or a suitable solvent according to the experimental requirements to prepare 1mg/mL storage solution, aliquot and store at -20 °C. Working solution: According to the experimental requirement, dilute Storage solution. The working solution can be stored at 4°C for 2-3 weeks after dilution.
Storage & Stability	The shelf life of liquid form is 6 months stored at -20 °C /-80 °C. The shelf life of lyophilized form is 12 months stored at -20 °C /-80 °C.
Applications	Antibody preparation, immunoassay (ELISA, WB), subcellular localization and interaction protein identification, etc.
Lead Time	5 to 10 business days; 2 to 3 days for stock products

Figure. SDS-PAGE	 Bis-Tris (MOPS) SDS-PAGE

III. **Storage and Transportation**

Product is stable for up to twelve months from date of receipt under sterile conditions at -20℃ to -80℃. For optimal storage the lyophilized powder and protein stock solution should be aliquoted, and avoid freeze-thaw cycles.

IV. **Background**

Interleukin IL-1β also known as catabolin, is a member of the interleukin 1 cytokine family. IL1B, the cytokine encoded by the IL1B gene, is an inflammatory response and fever mediator, and contributes to several lymphocyte activities including growth and differentiation of B-cells, proliferation of T-helper Type2 (Th2) clones, and activation of Th17 cells. IL-1β is produced in peripheral blood mononuclear cells, tissue macrophages, and dendritic fine cells in response to immune responses, inflammation, infection, and trauma cells such as cytium. IL1B is required for T-cell activation in some immune responses, and thus could contribute to increased T-cell replication. IL-1β can also act on distant target cells in an endocrine manner to induce systemic immune response. IL-1β can rapidly induce the expression of cytokines such as IL-6 and IL-8 of various cell types. At the same time, IL-1β also induces its own expression, forming a positive feedback loop and amplifying the IL-1 response.

V. **References**

1. Niquelle Brown Wadé et al. Infectious mononucleosis, immune genotypes, and non-Hodgkin lymphoma (NHL): an InterLymph Consortium study. Cancer Causes & Control: An International Journal of Studies of Cancer in Human Populations, 2020, 31(599) : 451-462
2. Lichtman AH, Chin J, Schmidt JA, Abbas AK (1988) Role of interleukin 1 in the activation of T lymphocytes. Proc Natl Acad Sci U S A 85:9699–9703
3. Schett G, Dayer J-M, Manger B (2016) Interleukin-1 function and role in rheumatic disease. Nat Rev Rheumatol 12:14–24