

Mouse IL-1 beta/IL1B, C-His Tag Protein

HA210962



Product name:	Mouse IL-1 beta/IL1B, C-His Tag
Species reactivity:	Mouse
Bio-Activity:	Testing in progress.
Protein construction description:	A DNA sequence encoding the mouse IL-1 beta/IL1B protein (P10749) (Val 118-Ser 269) was expressed with a His tag at the C-terminus.

Background:	The Interleukin 1 (IL-1) family of proteins consists of IL-1 alpha, IL-1 beta, and the IL-1 receptor antagonist (IL-1ra). IL-1 alpha and IL-1 beta bind to the same cell surface receptors and share biological functions. IL-1 is not produced by unstimulated cells of healthy individuals with the exception of skin keratinocytes, some epithelial cells, and certain cells of the central nervous system. However, in response to inflammatory agents, infections, or microbial endotoxins, a dramatic increase in the production of IL-1 by macrophages and various other cell types is seen. IL-1 beta plays a central role in immune and inflammatory responses, bone remodeling, fever, carbohydrate metabolism, and GH/IGF-I physiology. Inappropriate or prolonged production of IL-1 has been implicated in a variety of pathological conditions including sepsis, rheumatoid arthritis, inflammatory bowel disease, acute and chronic myelogenous leukemia, insulindependent diabetes mellitus, atherosclerosis, neuronal injury, and aging-related diseases. IL-1 alpha and IL-1 beta are structurally related polypeptides that show approximately 25% homology at the amino acid (aa) level. Both are synthesized as 31 kDa precursors that are subsequently cleaved into mature proteins of approximately 17.5 kDa. Cleavage of the IL-1 beta precursor by Caspase-1/ICE is a key step in the inflammatory response. Neither IL-1 alpha nor IL-1 beta contains a typical hydrophobic signal peptide, but evidence suggests that these factors can be secreted by non-classical pathways. A portion of unprocessed IL-1 alpha can be presented on the cell membrane and may retain biological activity. The precursor form of IL-1 beta, unlike the IL-1 alpha precursor, shows little or no biological activity in comparison to the processed form. Both unprocessed and mature forms of IL-1 beta are exported from the cell.
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Purity:	>95% as determined by SDS-PAGE.
Endotoxin:	Less than 1.0 EU per µg by the LAL method.
Fragment region:	IL-1 beta/IL1B (118-269)
Source:	HEK293
Accession:	P10749
Predicted molecular mass:	18.8 kD
Formulation:	Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol.
Reconstitution:	Reconstitute at 250 µg/ml in sterile water.
Storage:	Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20°C to -80°C. It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles.

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

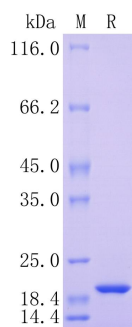


Fig1: Protein on SDS-PAGE under reducing (R) condition.

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