

Recombinant Human IL-1 beta (His, Strep)

Information

Gene ID	3553
Accession #	P01584
Alternate Names	Human IL1 beta; IL-1 beta; IL-1; IL-1b; IL1-BETA; IL-1F2; IL-1 beta; interleukin-1 beta
Source	HEK293
Protein sequence	APVRSNLNCTLRDSQQKSLVMSGPYELKALHLQGQDMEQQVVFMSFSVQGEESNDKIPVALGLKEKNLYLSC VLKDDKPTLQLESVDPKNYPKKKMEKRFVFNKIEINNKLFEESAQFPNWIYSTQAENMPVFLGGTKGGQDI TDFTMQFVSS
Tag	C-His, C-Strep
M.Wt	The protein has a calculated MW of 17.4 kDa.
Appearance	Solution protein.
Stability & Storage	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 2 years from date of receipt, -20 to -70°C as supplied.
Concentration	1 mg/mL
Formulation	Supplied as a 0.2 µm filtered solution in PBS, pH7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	Testing in progress.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Quality Control

Purity	> 95 % by SDS-PAGE.
Endotoxin	Less than 1.0 EU/µg as determined by LAL method.

Description

Interleukin 1 β (IL1 β or IL1B), also known as catabolin, is a member of the interleukin 1 family of cytokines. IL1 refers to two pleiotropic cytokines, IL-1 α (IL-1F1) and IL-1 β (IL-1F2), which are products of different genes. IL-1 α and IL-1 β are structurally related peptides that share about 21% amino acid (aa) identity in humans. Both proteins are produced by a wide variety of cells in response to inflammatory factors, infections, or microbial endotoxins. While IL-1 α and IL-1 β are independently regulated, they bind to the same receptor and exert the same biological role. IL-1RI binds directly to IL-1 α or IL-1 β and then to the IL-1R accessory protein (IL-1R3/IL-1RAcP) to form a high-affinity receptor complex capable of signal transduction. IL-1RII has a high affinity for IL-1 β but acts as a decoy receptor and a negative regulator of IL-1 β activity. Human IL-1 β cDNA encodes a precursor of 269 amino acids. The cysteine protease IL-1 β convertase (Caspase-1/ICE) cleaves the 116aa propeptide intracellularly to produce active cytokines [5-7]. The 17 kDa mature human IL-1 β has 96% aa sequence homology with rhesus macaques and 67%-78% aa sequence homology with dogs, cotton mice,

horses, cats, mice, pigs, and rats.

Reference

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- [4]. Isoda, K. and F. Ohsuzu (2006) J. Atheroscler. Thromb. 13:21.
- [5]. March, C.J. et al. (1985) Nature 315:641.
- [6]. Auron, P.E. et al. (1984) Proc. Natl. Acad. Sci. 81:7907.
- [7]. Martinon, F. and J. Tschopp (2007) Cell Death Differ. 14:10.



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