

Recombinant Human IL-1beta/IL-1F2

Information

Accession #	P01584
Alternate Names	Human IL1 beta; IL-1 beta; IL-1; IL-1b; IL1-BETA; IL1F2; IL-1 beta; interleukin-1 beta
Source	Human embryonic kidney cell, HEK293-derived human IL1-beta protein
Protein sequence	Ala117-Ser269
M.Wt	17.4 kDa
Appearance	Solution protein.
Stability & Storage	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 3 years from date of receipt, -20 to -70 °C as supplied.
Concentration	1 mg/mL
Formulation	Dissolved in sterile PBS buffer.
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	Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The EC50 for this effect is 1-10 pg/mL.
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%, determined by SDS-PAGE.
Endotoxin	<0.010 EU per 1 ug of the protein by the LAL method.

Description

Interleukin-1 beta (IL1 beta or IL1B) also known as catabolin, is a member of the interleukin 1 cytokine family. IL1 is a name that designates two pleiotropic cytokines, IL-1 alpha (IL-1F1) and IL-1 beta (IL-1F2), which are the products of distinct genes. IL-1 alpha and IL-1 beta are structurally related polypeptides that share approximately 21% amino acid (aa) identity in human. Both proteins are produced by a wide variety of cells in response to inflammatory agents, infections, or microbial endotoxins. While IL-1 alpha and IL-1 beta are regulated independently, they bind to the same receptor and exert identical biological effects. IL-1RI binds directly to IL-1 alpha or IL-1 beta and then associates with IL-1R accessory protein (IL-1R3/IL-1RAcP) to form a high-affinity receptor complex that is competent for signal transduction. IL-1RII has high affinity for IL-1 beta but functions as a decoy

receptor and negative regulator of IL-1 beta activity. The human IL-1 beta cDNA encodes a 269 aa precursor. A 116 aa propeptide is cleaved intracellularly by the cysteine protease IL-1 beta converting enzyme (Caspase-1/ICE) to generate the active cytokine [5-7]. The 17 kDa mature human IL-1 beta shares 96% aa sequence identity with rhesus and 67%-78% with canine, cotton rat, equine, feline, mouse, porcine, and rat IL-1 beta.

Reference

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