

General Information

Synonyms	IL1 beta; IL-1; IL1B; IL-1b; IL1-BETA; IL-1F2; IL1F2IL-1 beta; interleukin 1-beta
Accession #	NP_032387
Source	Human embryonic kidney cell, HEK293-derived mouse IL-1 beta/IL-1F2 protein
	Val118-Ser269
Predicted Molecular weight	17.5 kDa

Components and Storage

Formulation	Solution protein. Dissolved in sterile PBS buffer to a concentration of 0.2 mg/mL. This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.
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Storage and Stability	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 12 months from date of receipt, -20 to -70 °C as supplied.
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Shipping	Shipping with dry ice.
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Quality

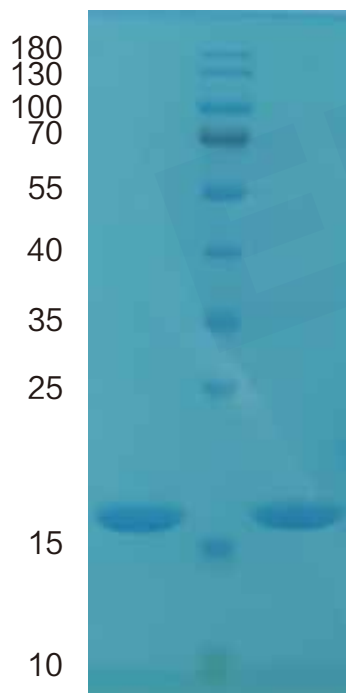
Purity	> 95%, determined by SDS-PAGE.
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method.
Activity	Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The EC50 for this effect is 1-4 pg/mL.

SDS-PAGE

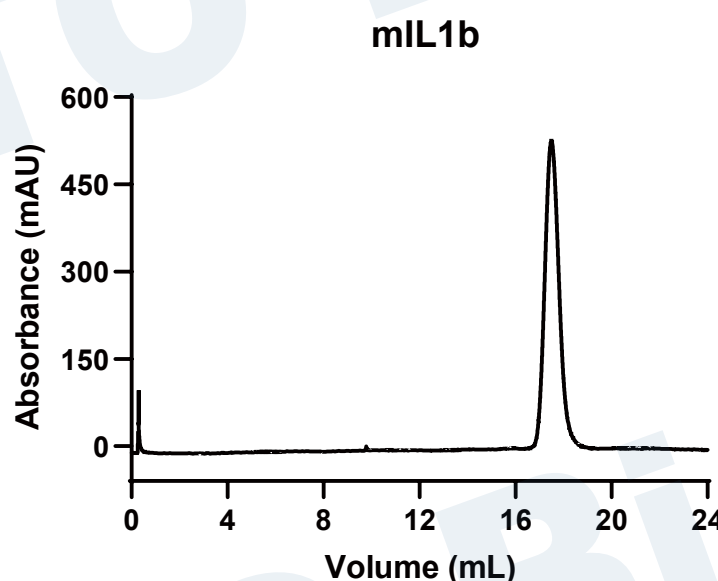
Gel filtration

Bioactivity

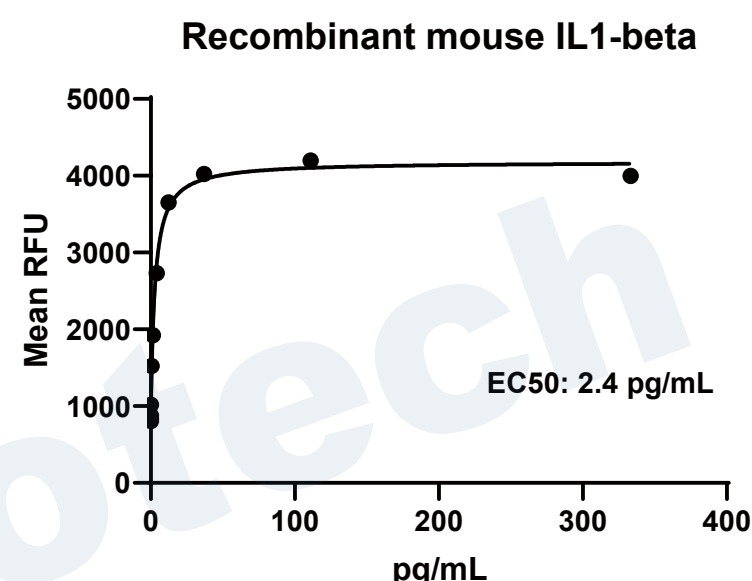
kDa Lane 1 Lane 2



2 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie Blue staining.



Size-exclusion chromatography of recombinant mouse IL1b protein (280 nm absorbance)



Recombinant mouse IL1b (Catalog # MF-1001B) stimulates cell proliferation of D10.G4.1 mouse helper T cells.

Background

Interleukin 1 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 17% amino acid (aa) identity in mouse. 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 (1-4). The mouse IL-1 beta cDNA encodes a 269 aa precursor. A 117 aa propeptide is cleaved intracellularly by the cysteine protease IL-1 beta -converting enzyme (Caspase-1/ICE) to generate the active cytokine (5, 6). The 17 kDa mature mouse IL-1 beta shares 90% aa sequence identity with cotton rat and rat and 65%-78% identity with canine, equine, feline, human, porcine, and rhesus IL-1 beta.

Reference

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