

Human recombinant IL-1 alpha (Interleukin-1 alpha) protein, AF

Catalog Number: PROTP01583-7

Overview

Product Name	Human recombinant IL-1 alpha (Interleukin-1 alpha) protein, AF
Description	Interleukin-1 alpha (IL1 alpha or IL1alpha) is a member of the interleukin-1 cytokine family, found constitutively present in epithelial layers of the entire gastrointestinal tract, lung, liver, kidney, endothelial cells, and astrocytes. The synthesized IL-1 alpha is a 31 kDa inactive precursor and can be cleaved by intracellular caspase-1 or extracellular proteases to generate the bioactive 17 kDa form and the 16 kDa N-terminal cleavage product. Both precursor and mature IL-1 alpha protein bind to the IL-1 receptor (IL-1R), initiating a cascade of inflammatory cytokines and chemokines production such as IL-6, IL-8, and TNF, in response to viral and bacterial pathogens conditions. IL-1 alpha plays a central role in immune-surveillance mechanisms, stimulating macrophages, neutrophils, and CD8+ T cells activity.
Size	5ug,20ug,100ug
Tag	His Tag (C-term)
Form	Lyophilized
Source	Escherichia coli
Formulation	The protein was lyophilized from a 0.2 um filtered solution containing 1X PBS, pH 8.0. If you have any concerns or special requirements, please confirm with us.

Storage

Lyophilized protein should be stored at -20°C for 1 year. Upon reconstitution, store at 2°C to 8°C for up to 1 week. Further dilute in a buffer containing a carrier protein or stabilizer (e.g. 0.1% BSA, 10%FBS, 5%HSA or 5% trehalose solution), protein aliquots should be stored at -20°C or -80°C for 3-6 months. Avoid repeated freeze/thaw cycles.

Purity

>98% as determined by SDS-PAGE.

Molecular weight

The protein has a calculated MW of 19 kDa. The protein migrates as 17 kDa under reducing condition (SDS-PAGE analysis).

Activity

Measure by its ability to induce D10.G4.1 cells proliferation. The ED₅₀ for this effect is 1 x10² IU/ mg.

Endotoxin

<0.1 EU per 1 ug of the protein by the LAL method.

Amino Acid Sequence

MSAPFSFLSNVKYNFMRIIKYEFILNDALNQSIIRANDQYLTAALHNLDEAVKFDMGAYKSSKDDAKITVILRISKTKLYVTAQDEDQPVLLKEMPEIPK
ITGSETNLLFFWETHGTKNYFTSVAHPNLFIA TKQDYWVCLAGGPPSITDFQILENQA with polyhistidine tag at the C-terminus.

Reconstitution

Centrifuge at 3000 rpm for 5 mins before opening. It is recommended to reconstitute the lyophilized protein in sterile H₂O to a concentration not less than 100 ug/mL and incubate the stock solution at room temperature for at least 20 mins to ensure sufficient re-dissolved. Do Not Vortex! Vigorous shaking may impair the biological activity of the protein.

Usage

Boster's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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