

Human IL-1 alpha / IL1A / IL1F1 Protein

Catalog Number: 10128-HNCH



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

IL-1A; IL-1F1; IL1; IL1-ALPHA; IL1F1

Protein Construction:

The processed form of human IL1 α (NP_000566.3) (Ser 113-Ala 271) was expressed and purified.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

1. Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The ED₅₀ for this effect is typically 0.2-1 ng/mL. 2. Measured by its ability to induced Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED50 for this effect is typically 0.07-0.35ug/mL.

Endotoxin:

< 1.0 EU per μ g of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ser 113

Molecular Mass:

The recombinant human IL1 α consists of 159 amino acids and has a predicted molecular mass of 18 kDa. As a result of glycosylation, the apparent molecular mass of rhIL1 α is approximately 22 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

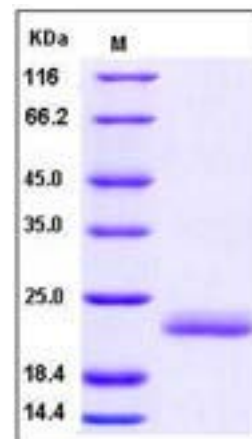
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

IL-1 alpha is a member of the interleukin 1 cytokine family. Cytokines are proteinaceous signaling compounds that are major mediators of the immune response. They control many different cellular functions including proliferation, differentiation and cell survival/apoptosis but are also involved in several pathophysiological processes including viral infections and autoimmune diseases. Cytokines are synthesized under various stimuli by a variety of cells of both the innate (monocytes, macrophages, dendritic cells) and adaptive (T- and B-cells) immune systems. Cytokines can be classified into two groups: pro- and anti-inflammatory. Pro-inflammatory cytokines, including IFN γ , IL-1, IL-6 and TNF- α , are predominantly derived from the innate immune cells and Th1 cells. Anti-inflammatory cytokines, including IL-10, IL-4, IL-13 and IL-5, are synthesized from Th2 immune cells. IL-1 alpha is a pleiotropic cytokine involved in various immune responses, inflammatory processes, and hematopoiesis. It is produced by monocytes and macrophages as a proprotein, which is proteolytically processed and released in response to cell injury, and thus induces apoptosis. IL-1 alpha stimulates thymocyte proliferation by inducing IL-2 release, B-cell maturation and proliferation, and fibroblast growth factor activity.

References

1. Nicklin MJ, *et al.* (1994) A physical map of the region encompassing the human interleukin-1 alpha, interleukin-1 beta, and interleukin-1 receptor antagonist genes. *Genomics*. 19(2):382-4.
2. March CJ, *et al.* (1985) Cloning, sequence and expression of two distinct human interleukin-1 complementary DNAs. *Nature*. 315(6021):641-7.
3. Bankers-Fulbright JL, *et al.* (1996) Interleukin-1 signal transduction. *Life Sci*. 59(2):61-83.

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