

Mouse IL-1 alpha / IL1A / IL1F1 Protein

Catalog Number: 50114-MNAE



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

Il-1a

Protein Construction:

A DNA sequence encoding the mature form of mouse IL1A (NP_034684.2) (Ser 115-Ser 270) was expressed, with an initial Met at the C-terminus.

Source: Mouse

Expression Host: E. coli

QC Testing

Purity: > 92 % 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 2-10 pg/mL. 2. Measured by its binding ability in a functional ELISA. 3. Immobilized mouse IL1A at 10 µg/mL (100 µl/well) can bind mouse IL1R1. The EC₅₀ of mouse IL1R1 is 0.13 µg/mL. 4. Measured by its ability to induced Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED50 for this effect is typically 3-15 ng/mL.

Endotoxin:

Please contact us for more information.

Stability:

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

Predicted N terminal: Met

Molecular Mass:

The recombinant mouse IL1A consists of 157 amino acids and migrates as an approximately 18 kDa band in SDS-PAGE under reducing conditions as predicted.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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:

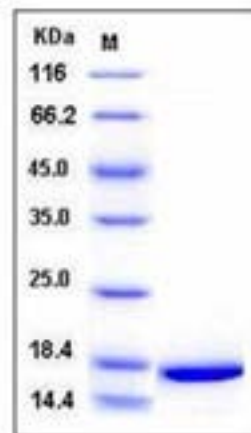
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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 IFNgamma, IL-1, IL-6 and TNF-alpha, 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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For US Customer: Fax: 267-657-0217 • Tel: 215-583-7898

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