

Mouse IL-1 alpha / IL1A / IL1F1 Protein

Catalog Number: 50114-MNAE



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

RP23-160G19.8, 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.

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 and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

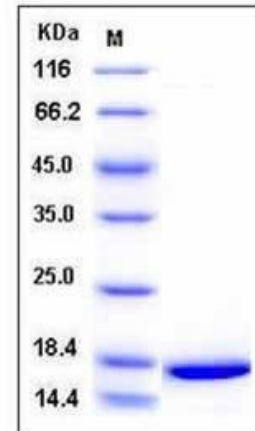
Usage Guide

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.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Interleukin 1 (IL1) is an important cytokine mediator involved in a variety of biological processes including immune responses, inflammatory, and promoting tissue degradation. IL1 comprises two proteins, designated as IL-1 alpha/IL1 α and IL-1 beta/IL1 β which are encoded by distinct genes, and bind the same surface receptors with high affinity. IL1 proteins are synthesized as 31 kDa cytosolic precursors in monocytes and macrophages without signal peptides, and are proteolytically processed and released as 17kDa mature molecules in response to various stimulus not via the classical secretory pathway. It has been reported that release of IL1 is efficiently induced by cell injury. IL-1 alpha/IL1 α is released as a mixture of unprocessed and processed molecules cleaved by a calpain-like protease, and both of the forms show full biological activity. Elevated levels of IL-1 alpha/IL1 α have been associated with a number of chronic disorders, including rheumatoid arthritis and Alzheimer's disease, and therefore, may provide novel targets for therapeutic approaches aimed at controlling inflammatory processes.

References

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3. Griffin, W.S. et al. 2002, J. Leukoc. Biol. 72: 233-238.
4. Perreiaux, D.G. et al., 1998, J. Immunol. 160: 2469-2477.
5. Brunn, G.J. et al., 2008, Circ. Res. 102: 823-830.

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