Human IL-1 beta / IL1B Protein

Catalog Number: 10139-HNAE

General Information

Gene Name Synonym:
IL-1; IL-1 beta; IL1B; IL1-BETA; IL1F2

Protein Construction:
A DNA sequence encoding the mature form of human IL1β (NP_000567.1) (Ala 117-Ser 269) was expressed.

Source:
Human

Expression Host:
E. coli

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. Immobilized Human IL-1 beta (Cat:10139-HNAE) at 2 μg/ml (100 μl/well) can bind Human IL1R2 hFc(Cat:10111-H02H), the EC50 of Human IL1R2 hFc is 150-600 ng/mL.
2. Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The ED50 for this effect is typically 2-8 pg/mL.
3. Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED50 for this effect is 0.4-2 ng/mL.
4. Using the Octet RED System, the affinity constant (Kd) of IL1R2 Protein, Human, Recombinant (Fc Tag) (Cat. 10111-H02H) bound IL-1 beta Protein, Human, Recombinant (Cat. 10139-HNAE) was 6.0 nM.

Endotoxin:
Please contact us for more information.

Predicted N terminal:
Met

Molecular Mass:
The recombinant human IL1β consisting of 154 amino acids migrates with an apparent molecular mass of 17 kDa as estimated in SDS-PAGE under reducing conditions.

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

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20°C to -80°C.

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

Interleukin-1 beta (IL1 beta or IL1B) also known as catabolin, is a member of the interleukin 1 cytokine family. IL1 is a pleiotropic cytokine. It is involved in the inflammatory response, cell growth, and tissue repair in the cortex. The IL1 superfamily consists of three members, IL1A (IL1 alpha), IL1B (IL1 beta), and IL1 receptor antagonist (IL1Ra). In clinical, it has been reported that Interleukin (IL)-1 may influence Th1 / Th2 immune responsiveness and has been implicated in the establishment of a successful pregnancy. Proinflammatory interleukin (IL)-1 gene polymorphisms associated with high levels of IL-1beta activity increase the risk for hypochlorhydria and distal gastric carcinoma. IL1B polymorphisms may be involved in susceptibility to SSc. Moreover, the IL2-384-G allele may be a marker for the limited phenotype of systemic sclerosis (SSc).

References