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Datasheet for 009-001-V24-0100

rHuman IL-1-alpha Protein

Overview

Description:	Human Interleukin-1-alpha Recombinant Protein - 009-001-V24-0100
Item No.:	009-001-V24-0100
Size:	100 µg
Applications:	SDS-PAGE, Cellular Assay
Origin:	Human
Expressed in:	E. coli

Product Details

Background:	Interleukin-1 alpha (IL-1α) is constitutively expressed by epithelial cells, but can also be produced by most other cells upon stimulation. IL-1β and IL-1α are two distinct and independently regulated gene products that comprise IL-1 and signal through the Type 1 IL-1 receptor (IL-1R1). Although IL-1α is cell associated and IL-1β is secreted, they have nearly identical biological activity in that they induce adhesion molecule expression on epithelial cells, control fever induction, and play a role in arthritis and septic shock. Signaling activated by the IL-1R1 promotes these activities through a MYD88 signaling pathway similar to those associated with Toll receptors. Recombinant human IL-1α is a non-glycosylated single chain protein, containing 159 amino acids, with a molecular weight of 18 kDa.
Synonyms:	IL-1F1, FAF, BAF, LEM, LAF, Hematopoietin-1
Species of Origin:	Human
Expressed in:	E. coli
Type:	Recombinant Protein
Low Endotoxin:	Yes

Target Details

Gene Name:	IL1A
Purity/Specificity:	Interleukin-1-alpha purity was determined to be greater than 97% as determined by HpLC, analysis by UV-Spectroscopy at 280nm, and by reducing and non-reducing SDS-pAGE.
Relevant Links:	• UniProtKB - P01583

Application Details

Tested Applications:	SDS-PAGE
Suggested Applications:	Cellular Assay (Based on references)
Application Note:	Interleukin-1-alpha Recombinant Protein has been tested by SDS-PAGE and biological activity and is suitable as a control for polyclonal or monoclonal anti-Interleukin-1-alpha in immunological assays.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
Other:	Endotoxin Level: Measured by kinetic LAL analysis and is typically ≤ 1 EU/µg protein. Biologic Activity: The activity is determined by the stimulation of D10S.G4.1 cells and is typically 1-6 pg/mL.

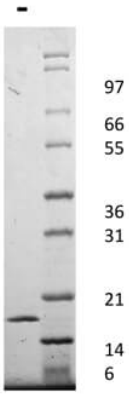
Formulation

Physical State:	Lyophilized
Buffer:	0.01 M Sodium Phosphate, pH 7.5
Preservative:	None
Stabilizer:	None
Reconstitution Volume:	100 µL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

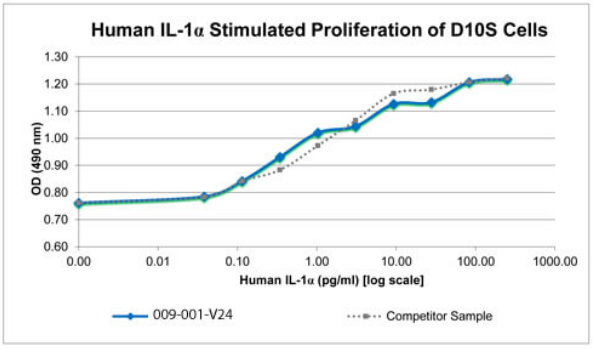
Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. Dilute only prior to immediate use. Maintain sterility. This product DOES NOT contain preservative. DO NOT VORTEX. We recommend adding a carrier protein such as HSA or BSA to 0.1% (i.e. 1.0 mg/mL). For best results aliquot contents and freeze at -20° C or colder. Avoid cycles of freezing and thawing. Centrifuge vial before each opening to dislodge contents from the cap and to clarify if contents are not clear after standing at room temperature.
Expiration:	Expiration date is six (6) months from date of receipt.

Images



SDS-PAGE

SDS-PAGE Human Interleukin-1-alpha Recombinant Protein. Lane 1: 1 µg Human IL-1-alpha in non-reducing conditions (-). Lane 2: Molecular weight marker. Human IL-1-alpha has a predicted MW of 18 kDa.



SDS-PAGE

Bioactivity of Human Interleukin-1-alpha Recombinant Protein. Serial dilutions of Human IL-1α (starting at 250 pg/mL) were added to D10S cells. After 42 hours, cell proliferation was measured and the linear portion of the curve was us used to calculate the ED50. The ED50 of Human IL-1α is between 0.6-0.8 pg/mL. This value is comparable to the typical expected range of 1-6 pg/mL.

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