



Synonym

IL1A,IL-1 ALPHA,IL1F1,IL1 α

Source

Human IL-1 alpha Protein, premium grade(ILA-H5214) is expressed from human 293 cells (HEK293). It contains AA Ser 113 - Ala 271 (Accession # [P01583-1](#)).

Predicted N-terminus: Ser 113

Human IL-1 alpha Protein, premium grade (ILA-H5214), designed for preclinical stage, has the same activity and performance with GMP Human IL-1 alpha Protein, which enables a seamless transition from preclinical development to clinical phases. Premium Grade product offer a cost efficient alternative of GMP Grade products for the early development phase when safety of raw materials is not top priority. By using Premium Grade products in early development phase, you can transition easily into clinical and commercial phase without need to revalidate the raw materials and modify manufacturing process.

Molecular Characterization

IL-1 alpha(Ser 113 - Ala 271)
P01583-1

This protein carries no "tag".

The protein has a calculated MW of 18.0 kDa. The protein migrates as 22 kDa \pm 3 kDa under reducing (R) condition, and 22 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under non-reducing (NR) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.1 EU per μ g by the LAL method.

Sterility

Negative

Mycoplasma

Negative.

Purity

>95% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

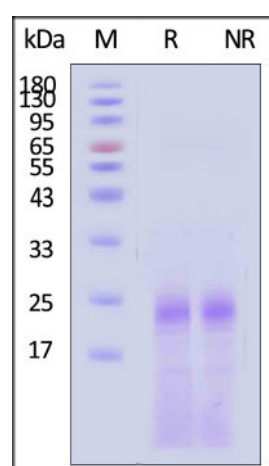
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

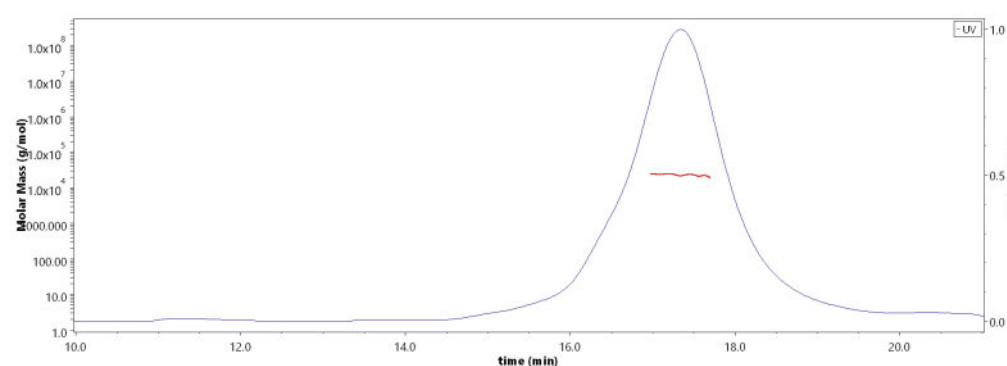
- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human IL-1 alpha Protein, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue.

SEC-MALS



The purity of Human IL-1 alpha Protein, premium grade (Cat. No. ILA-H5214) is more than 95% and the molecular weight of this protein is around 16-26 kDa verified by SEC-MALS.

[Report](#)

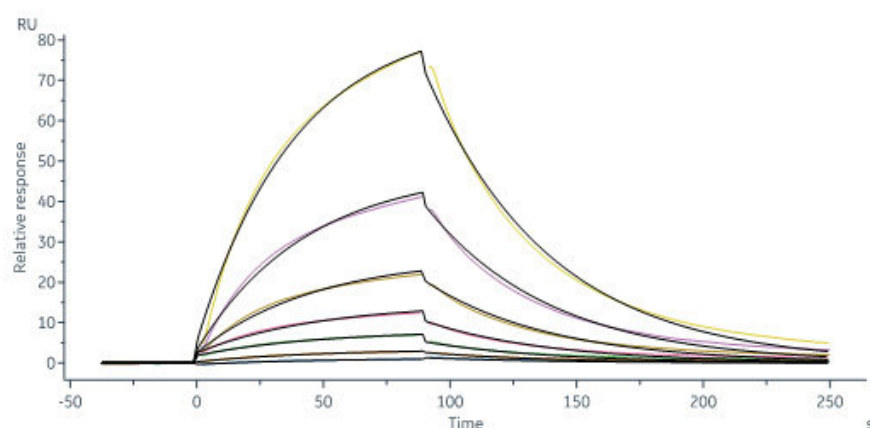
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The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-SPR



Human IL-1 RII, Fc Tag (Cat. No. IL2-H4256) immobilized on CM5 Chip can bind Human IL-1 alpha Protein, premium grade (Cat. No. ILA-H5214) with an affinity constant of $18.8 \mu\text{M}$ as determined in a SPR assay (Biacore 8K) (QC tested).

Background

Interleukin-1 alpha (IL1 α) is also known as IL-1A, IL1, IL1-ALPHA, IL1F1, and is a cytokine of the interleukin-1 family. IL1 α possesses a wide spectrum of metabolic, physiological, haematopoietic activities, and plays one of the central roles in the regulation of the immune responses. It binds to the interleukin-1 receptor. IL-1 α is constitutively produced by epithelial cells. It is found in substantial amounts in normal human epidermis and is distributed in a 1:1 ratio between living epidermal cells and stratum corneum. The constitutive production of large amounts of IL-1 α precursor by healthy epidermal keratinocytes interfere with the important role of IL-1 α in immune responses, assuming skin as a barrier, which prevents the entry of pathogenic microorganisms into the body. In vitro, IL-1 α possesses biological effect on cells in the picomolar to femtomolar range. In vivo, Shortly after an onset of an infection into organism, IL-1 α activates a set of immune system response processes.

Clinical and Translational Updates

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