

Human IL-27 Protein, premium grade

Catalog # IL7-H5319



Synonym

Interleukin-27, IL27A&IL27B, EBI3&p28

Source

Human IL-27 Protein, premium grade (IL7-H5319) is expressed from CHO cells. It contains AA Phe 29 - Pro 243 & Arg 21 - Lys 229 (Accession # [Q8NEV9-1](#) & [Q14213-1](#)).

Predicted N-terminus: Phe 29

It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.

Molecular Characterization

This protein carries no "tag".

The protein has a calculated MW of 47.8 kDa. The protein migrates as 54 kDa $\pm$ 3 kDa, 78 kDa and 166 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.01 EU per μ g by the LAL method / rFC method.

Host Cell DNA

<0.02 ng/ μ g of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μ m filtered solution in 20 mM HEPES, 150 mM NaCl, pH7.0 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.

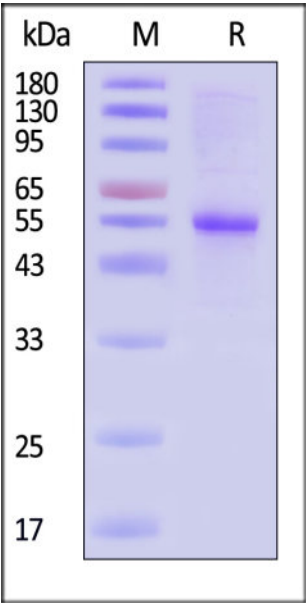
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

ACRO Quality Management System

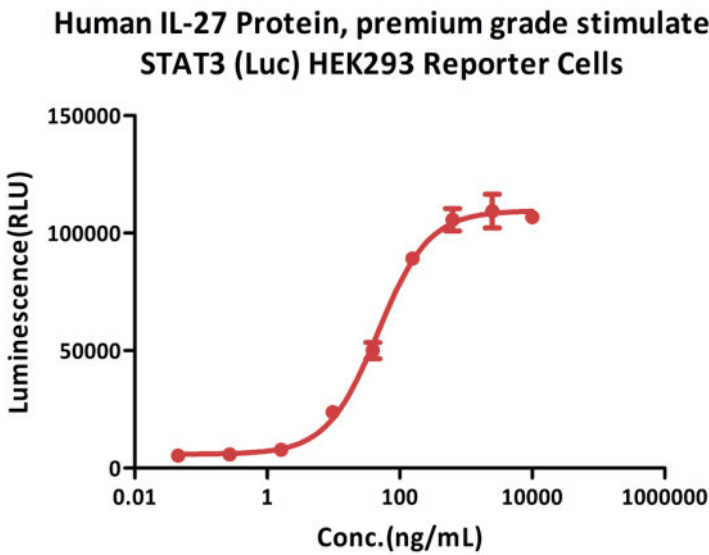
- [QMS\(ISO, GMP\)](#)
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



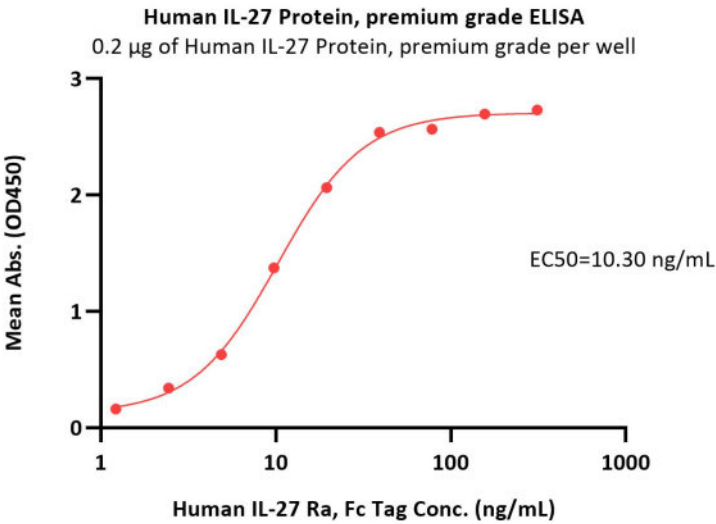
Human IL-27 Protein, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-CELL BASE



Human IL-27 Protein, premium grade (Cat. No. IL7-H5319) stimulates STAT3 (Luc) HEK293 Reporter Cells. The specific activity of Human IL-27 Protein, premium grade is > 1.00 x 10⁴ U/mg (QC tested).

Bioactivity-ELISA



Immobilized Human IL-27 Protein, premium grade (Cat. No. IL7-H5319) at 2 µg/mL (100 µL/well) can bind Human IL-27 Ra, Fc Tag (Cat. No. ILA-H5254) with a linear range of 1-20 ng/mL (QC tested).

Background

Interleukin-27 (IL-27) is a heterodimeric cytokine belonging to the IL-12 family that is composed of two subunits, Epstein-Barr virus (EBV)-induced gene 3 (EBI3) (also known as IL-27B) and IL27-p28 (known as IL-30). IL-27 is produced by antigen-presenting cells. IL-27 plays an important function in regulating the activity of B and T lymphocytes. The effects of IL-27 are eliciting by its interaction with a specific cell surface receptor complex composed of two proteins known as IL27R and gp130. IL-27 is a cytokine with pro- and anti-inflammatory properties, that can regulate T helper cell development, suppress T-cell proliferation, stimulate cytotoxic T

cell activity, induce isotype switching in B-cells, and that has diverse effects on innate immune cells. Among its target cells are CD4 T helper cells which can differentiate in type 1 effector cells (TH1), type 2 effector cells (TH2) and IL17 producing helper T-cells (TH17). It drives rapid clonal expansion of naive but not memory CD4 T-cells. IL-27 reveals to be a potent inhibitor of TH17 cell development and of IL-17 production. IL-27 also antagonizes the effects of some cytokines such as IL6 through direct effects on T cells. Another important role of IL-27 is its antitumor activity and antiangiogenic activity.



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