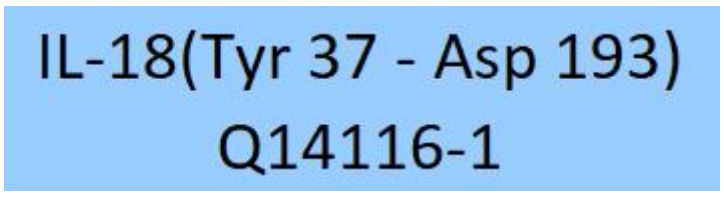
Synonym

IL-18,Interleukin-18,IL18,IL-1 gamma,IGIF,IL1F4,IL-1F4

Source

Human IL-18 Protein, premium grade(IL8-H5114) is expressed from E. coli cells. It contains AA Tyr 37 - Asp 193 (Accession # Q14116-1).
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.
GMP-L18H16 is the GMP version of this IL8-H5114. These two proteins display indistinguishable performance profiles, thereby ensuring a seamless transition for end users from early preclinical stag to later clinical phases.

Molecular Characterization



This protein carries no "tag".

The protein has a calculated MW of 18.2 kDa. The protein migrates as 17 kDa±3 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE).

Endotoxin

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

Host Cell Protein

<0.5 ng/μg of protein tested by ELISA.

Host Cell DNA

<0.02 ng/μg of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm 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

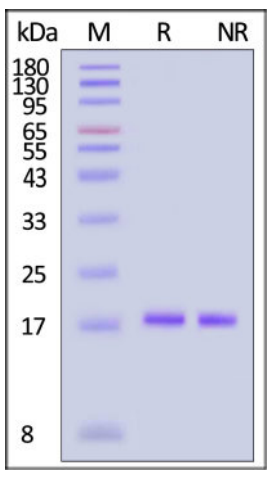
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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.

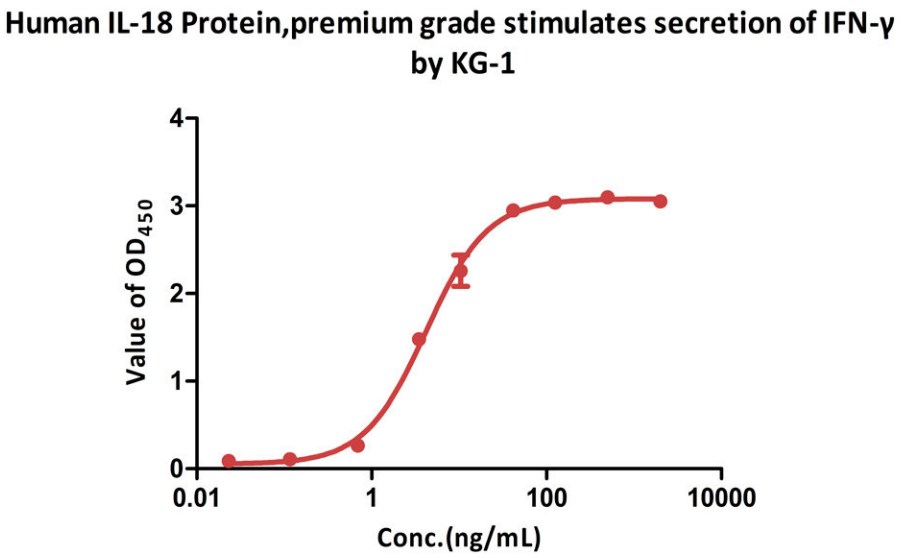
SDS-PAGE



Human IL-18 Protein, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The

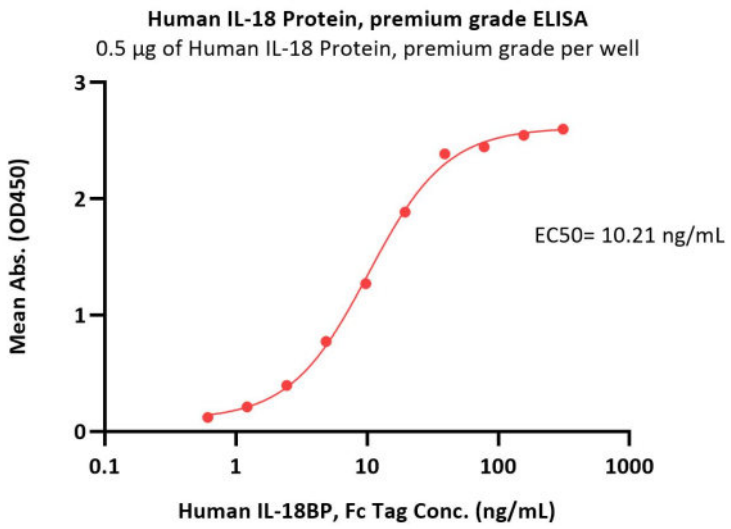
purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

Bioactivity-CELL BASE



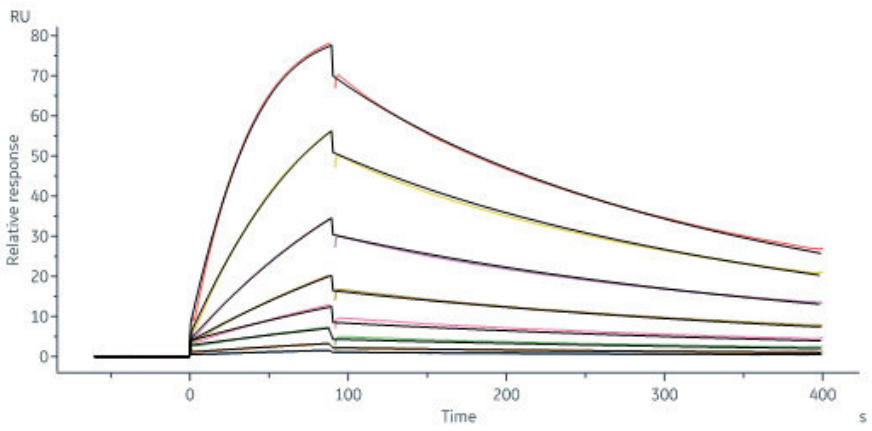
Human IL-18 Protein, premium grade (Cat. No. IL8-H5114) stimulates secretion of IFN-γ by KG-1 cells. The specific activity of Human IL-18 Protein, premium grade is > 3.00x10^6 IU/mg, which is calibrated against WHO Reference Reagent Interleukin-18 (Human rDNA derived) (NIBSC code: 03/200) (QC tested).

Bioactivity-ELISA

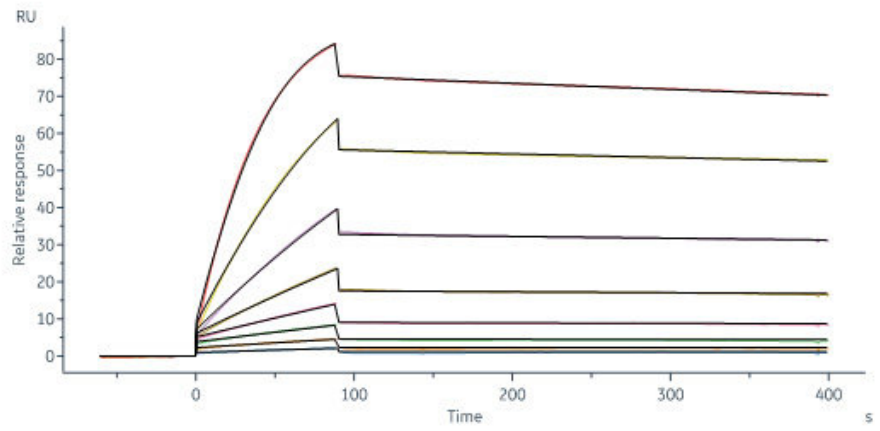


Immobilized Human IL-18 Protein, premium grade (Cat. No. IL8-H5114) at 5 μg/mL (100 μL/well) can bind Human IL-18BP, Fc Tag (Cat. No. ILP-H5253) with a linear range of 0.6-20 ng/mL (QC tested).

Bioactivity-SPR

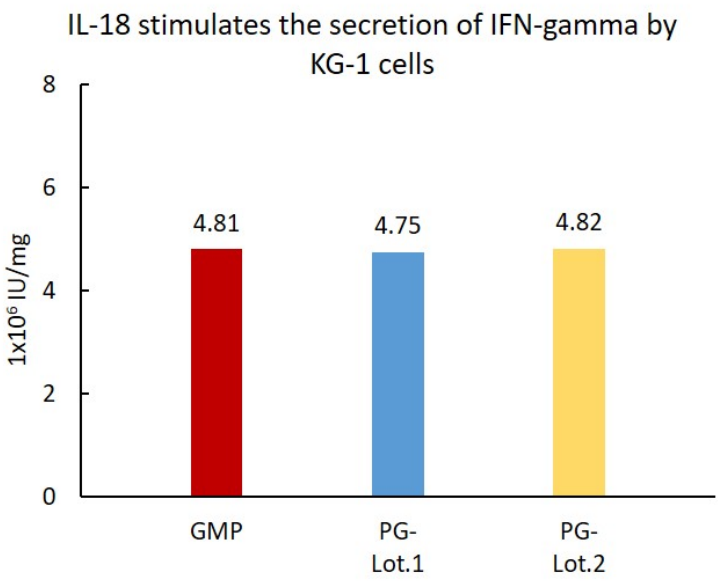


Biotinylated Human IL-18 R1, Fc,Avitag (Cat. No. IL1-H82F9) captured on Protein A Chip can bind Human IL-18 Protein, premium grade (Cat. No. IL8-H5114) with an affinity constant of 14.2 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).



Human IL-18BP, Fc Tag (Cat. No. ILP-H5253) captured on Protein A Chip can bind Human IL-18 Protein, premium grade (Cat. No. IL8-H5114) with an affinity constant of 0.781 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Bioactivity-Stability



The Cell based assay shows batch-to-batch consistency between Acro's GMP and PG IL-18.

Background

Interleukin-18 (IL-18) is a potent proinflammatory cytokine that induces interferon-gamma (IFN-gamma) production from Th1 cells, NK cells and activated macrophages, particularly in the presence of IL-12. IL-18 also functions in developmental regulation of T-lymphocyte helper type I cells and in Fas-mediated cytotoxicity. Suppression of IL-18 activity is being investigated for treatment of chronic inflammatory diseases such as Crohn's disease and rheumatoid arthritis. It acts by inducing heterodimerization of the two subunits of its receptor, IL-18RAlpha and IL-18RBeta shows structural similarity to IL-1.