Synonym

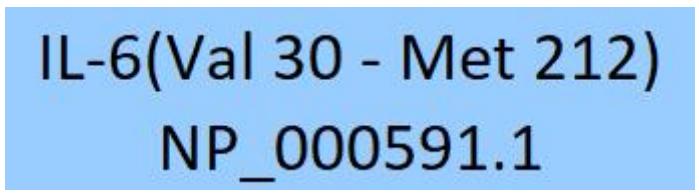
IL6,Interleukin-6,BSF2,HSF,IFNB2

Source

Human IL-6, premium grade(IL6-H4218) is expressed from human 293 cells (HEK293). It contains AA Val 30 - Met 212 (Accession # NP_000591.1).
Predicted N-terminus: Val 30

Human IL-6, premium grade (IL6-H4218), designed for preclinical stage, has the same activity and performance with GMP Human IL-6 (GMP-L06H27), 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



This protein carries no "tag".

The protein has a calculated MW of 20.8 kDa. The protein migrates as 23-29 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.01 EU per μg by the LAL 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

The sterility testing was performed by membrane filtration method.

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

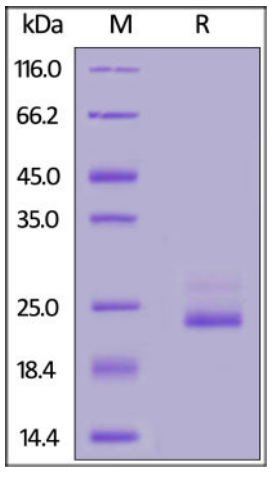
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

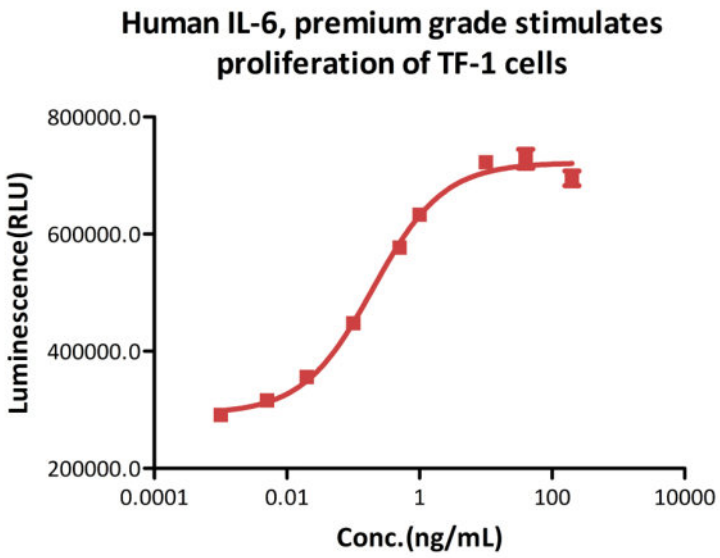
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

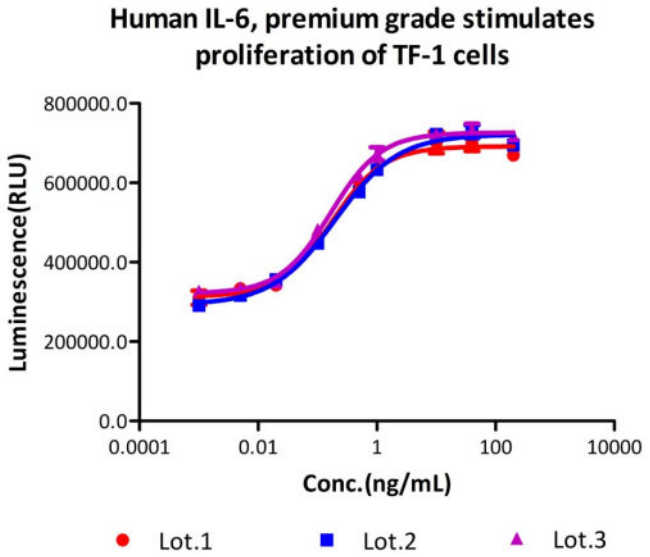


Human IL-6, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

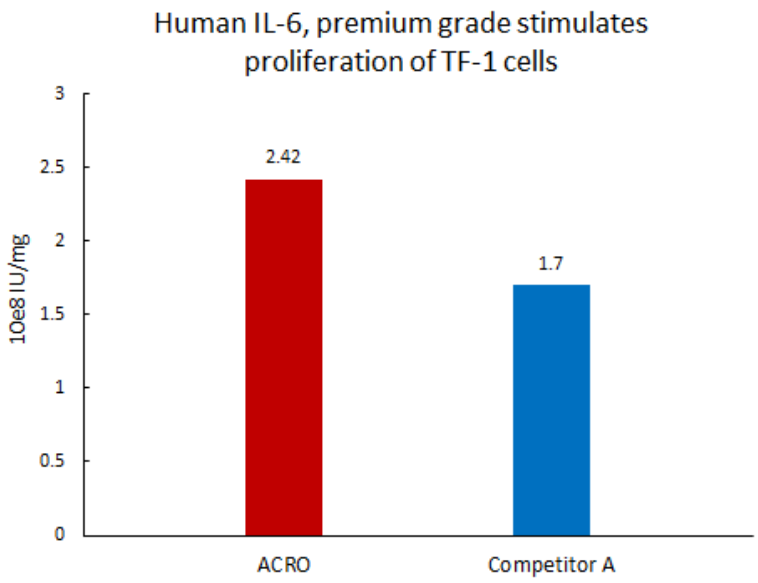
Bioactivity-Bioactivity CELL BASE



Human IL-6, premium grade (Cat. No. IL6-H4218) stimulates proliferation of TF-1 human erythroleukemic cell line. The specific activity of Human IL-6, premium grade is > 1.00×10^8 IU/mg, which is calibrated against human IL-6 WHO International Standard (NIBSC code: 21/308) (QC tested).

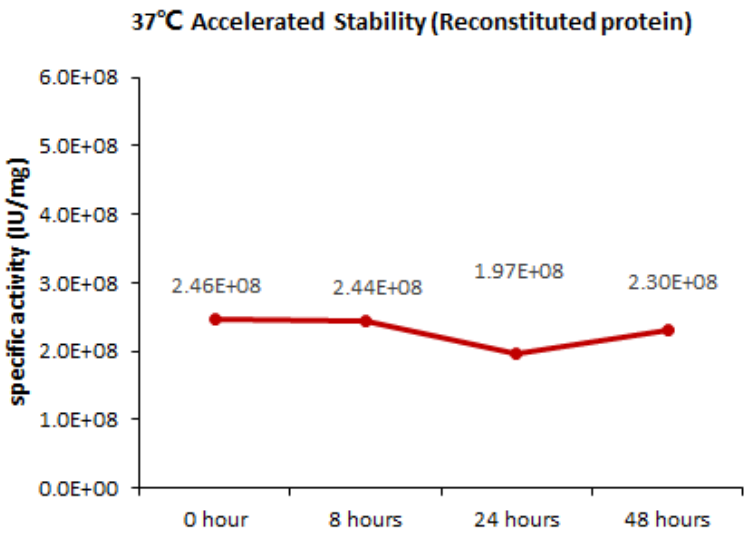


Activity of three different production batches of Human IL-6 Protein, premium grade (Cat. No. IL6-H4218).

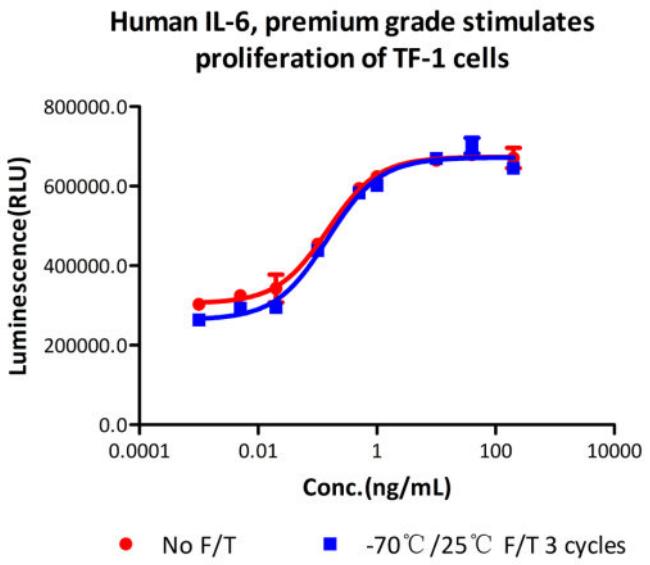


The activity of Human IL-6 Protein, premium grade (Cat. No. IL6-H4218) was higher than other competing products.

Bioactivity-Stability



The Cell based assay shows that Human IL-6 Protein, premium grade (Cat. No. IL6-H4218) is stable at 37°C for 48 hours.



The Cell based assay shows that Human IL-6 Protein, premium grade (Cat. No. IL6-H4218) is stable after freezing and thawing 3 times.

Background

Interleukin 6 (IL-6) is also known as HGF, BSF2,HSF, IFNB2 and IL-6, originally identified as a B cell differentiation factor, is a multifunctional cytokine that regulates immune responses, hematopoiesis, acute phase responses, and inflammatory reactions.It is secreted by T cells, macrophages , monocytes, fibroblasts,endothelial cells,et.al. to stimulate immune response to trauma, especially burns or other tissue damage leading to inflammation. Interleukin 6 has been shown to interact with interleukin-6 receptor and glycoprotein. IL-6 is relevant to many disease processes such as diabetes,atherosclerosis, depression,Alzheimer's Disease,systemic,lupus erythematosus,prostate cancer and rheumatoid arthritis. Advanced/metastatic cancer patients have higher levels of IL-6 in their blood.Hence there is an interest in developing anti-IL-6 agents as therapy against many of these diseases.

Clinical and Translational Updates