

Synonym

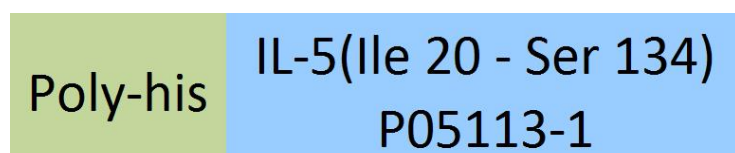
IL-5, TRF, IL5, Interleukin-5

Source

Human IL-5, His Tag, premium grade (IL5-H52H3) is expressed from human 293 cells (HEK293). It contains AA Ile 20 - Ser 134 (Accession # [P05113-1](#)).

Predicted N-terminus: His

Human IL-5, His Tag, premium grade (IL5-H52H3), designed for preclinical stage, has the same activity and performance with GMP Human IL-5, 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 a polyhistidine tag at the N-terminus

The protein has a calculated MW of 15.0 kDa. The protein migrates as 18-23 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.1 EU per µg by the LAL method.

Sterility

The sterility testing was performed by membrane filtration method.

Mycoplasma

Negative.

Purity

>90% 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.

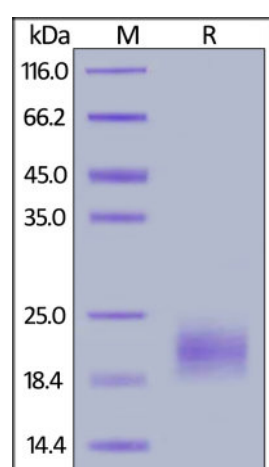
Storage

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:

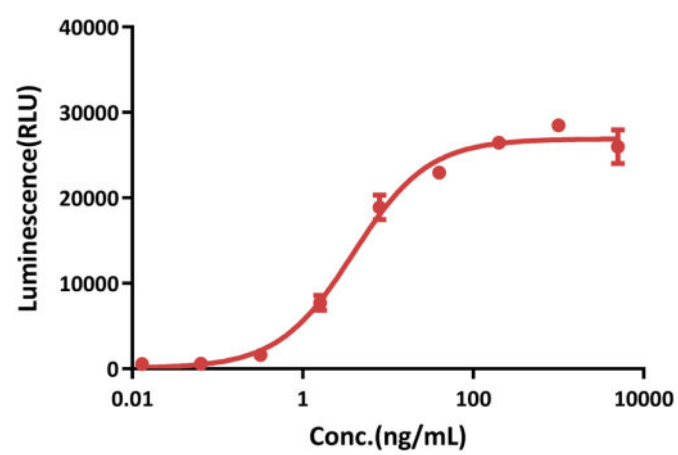
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

Human IL-5, His Tag, 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%.

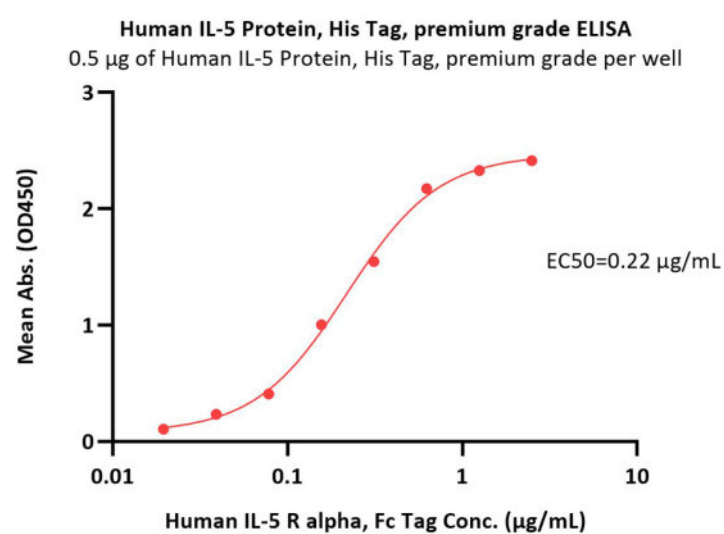
Bioactivity-Bioactivity CELL BASE

Human IL-5, premium grade stimulates proliferation 293F-STAT5/Luc-IL5RA-CD131-9 cells



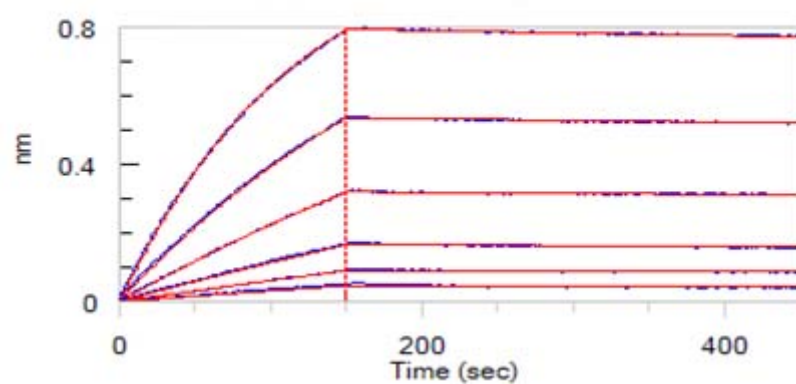
Human IL-5, His Tag, premium grade (Cat. No. IL5-H52H3) stimulates proliferation of 293F-STAT5/Luc-IL5RA-CD131-9 cells. The typically EC₅₀ for this effect is 3.909 ng/mL (QC tested).

Bioactivity-ELISA



Immobilized Human IL-5 Protein, His Tag, premium grade (Cat. No. IL5-H52H3) at 5 µg/mL (100 µL/well) can bind Human IL-5 R alpha, Fc Tag with a linear range of 0.02-0.313 µg/mL (QC tested).

Bioactivity-BLI



Loaded Human IL-5, His Tag, premium grade (Cat. No. IL5-H52H3) on NTA Biosensor, can bind Human IL-5 R alpha, Fc Tag with an affinity constant of 4.63 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

Interleukin 5 (IL5) is an interleukin produced by type-2 T helper cells and mast cells. IL-5 is a 115-amino acid (in human, 133 in the mouse) -long TH2 cytokine that is part of the hematopoietic family. Unlike other members of this cytokine family (namely interleukin 3 and GM-CSF), this glycoprotein in its active form is a homodimer. Interleukin-5 has long been associated with the cause of several allergic diseases including allergic rhinitis and asthma, wherein a large increase in the number of circulating, airway tissue, and induced sputum eosinophils have been observed. Given the high concordance of eosinophils and, in particular, allergic asthma pathology, it has been widely speculated that eosinophils have an important role in the pathology of this disease. Drugs that target IL-5 are mepolizumab and reslizumab.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.