

General Information

Synonyms	Human IL5; hIL-5, recombinant IL5, interleukin 5, EDF
Accession #	P05113
Source	Human embryonic kidney cell, HEK293-derived human IL5 protein
	Ile20-Ser134
Predicted Molecular weight	13 kDa (Monomer)
Form/Structure	Dimer in solution

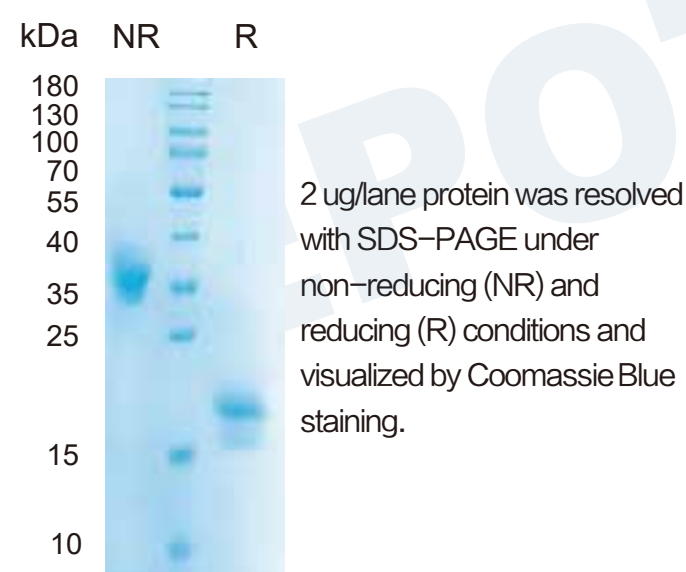
Components and Storage

Formulation	Solution protein. Dissolved in sterile PBS buffer to a concentration of 0.2 mg/mL. This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.
Storage and Stability	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 12 months from date of receipt, -20 to -70 °C as supplied.
Shipping	Shipping with dry ice

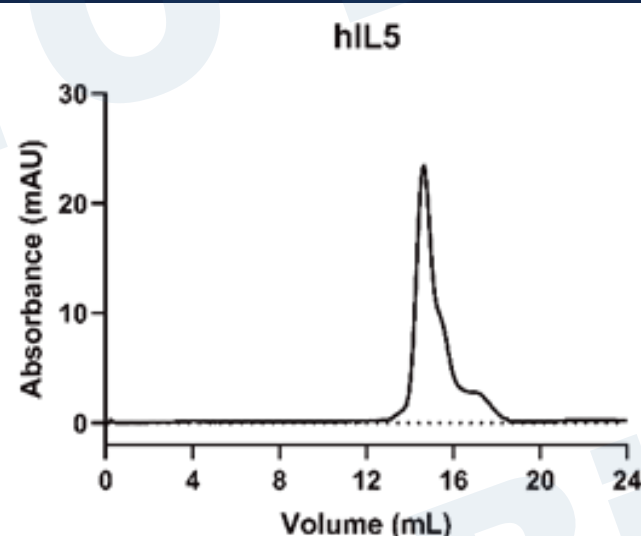
Quality

Purity	> 95%, determined by SDS-PAGE.
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method.
Activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The EC50 for this effect is 0.04-0.2 ng/mL.

SDS-PAGE

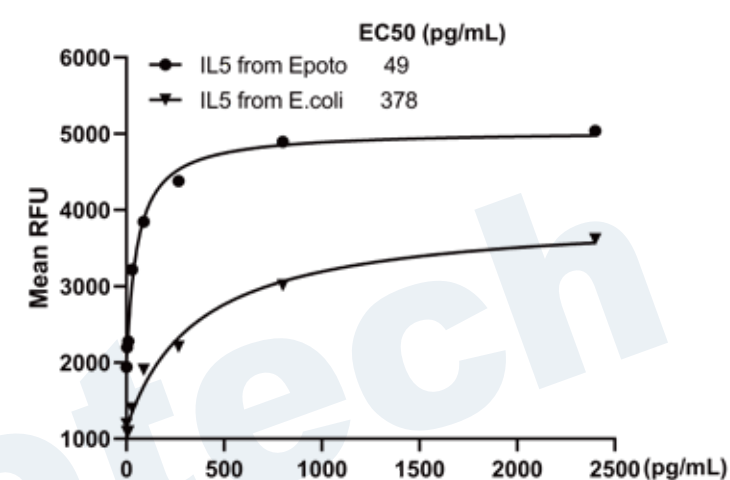


Gel filtration



Size-exclusion chromatography of recombinant human IL5 protein (280 nm absorbance)

Bioactivity



Recombinant human IL5 (Catalog # HF-1005) stimulates cell proliferation of the TF-1 human erythroleukemic cells.

Background

Interleukin 5 (IL5), is a secreted glycoprotein that belongs to the alpha-helical group of cytokines (1-3). IL5 is present as a covalently linked antiparallel dimer (4, 5). Mature human IL-5 shares 70%, 70%, 62%, 71%, 70% and 66%, aa sequence identity with mouse, rat, canine, equine, feline and porcine IL5, respectively and shows cross-reactivity with mouse IL5. IL5 is primarily produced by CD4+ Th2 cells, but also by activated eosinophils, mast cells, EBV-transformed B cells, Reed-Sternberg cells in Hodgkin's disease, and IL2-stimulated invariant natural killer T cells (7, 8). IL5 increases production and mobilization of eosinophils and CD34+ progenitors from the bone marrow and causes maturation of eosinophil precursors outside the bone marrow (1, 6, 9, 10). The receptor for human IL5, mainly expressed by eosinophils, but also found on basophils and mast cells, consists of a unique ligand-binding subunit (IL5R alpha) and a shared signal-transducing subunit, beta c (3, 6, 11). IL5R alpha first binds IL5 at low affinity, then associates with preformed beta c dimers, forming a high-affinity receptor (12). IL5 also binds proteoglycans, potentially enhancing its activity (13). Soluble forms of IL5R alpha antagonize IL5 and can be found in vivo (10, 14).

Reference

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