

### General Information

Synonyms	Human IL25; interleukin-25; IL25; IL-25; IL17E; IL-17E; interleukin-17E;
Accession #	Q9H293
Source	Human embryonic kidney cell, HEK293-derived human IL-25 protein
	Tyr33-Gly177
Predicted Molecular weight	16.7 kDa

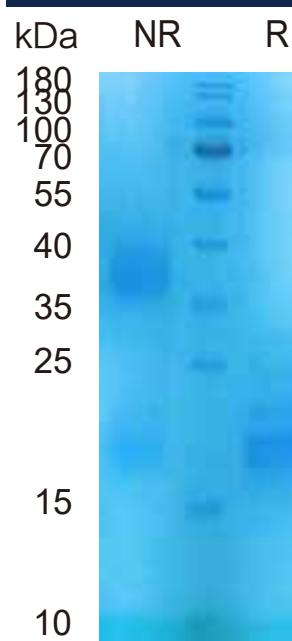
### Components and Storage

Formulation	Solution protein. Dissolved in sterile PBS buffer . 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

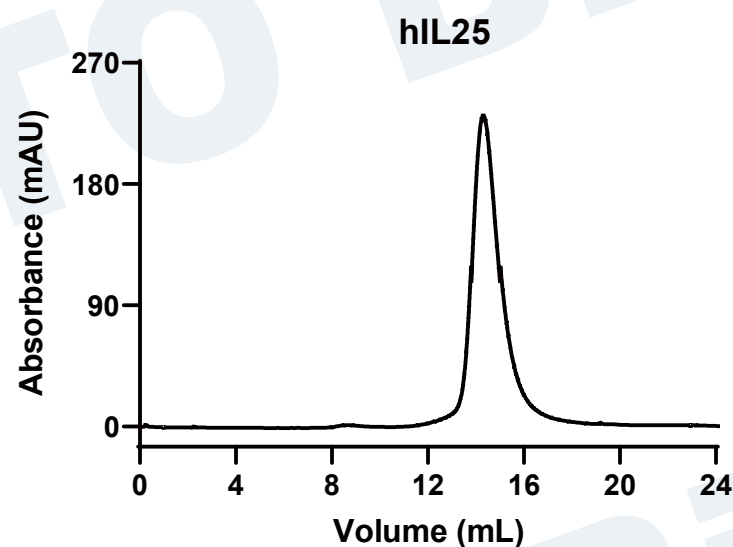
Purity	> 95%, determined by SDS-PAGE.
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method.
Activity	Measured by its ability to induce CXCL1/GRO alpha secretion in HT-29 human colon adenocarcinoma cells. The EC50 for this effect is 0.2-1.2 ng/mL.

### SDS-PAGE



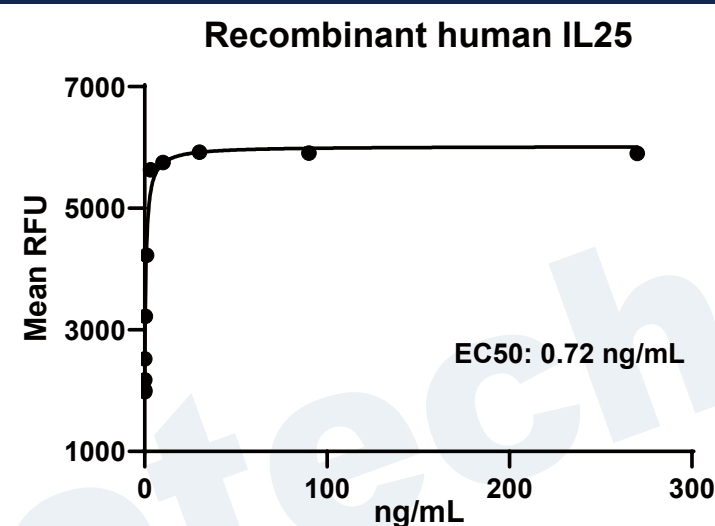
4 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie Blue staining.

### Gel filtration



Size-exclusion chromatography of recombinant human IL25 protein (280 nm absorbance)

### Bioactivity



Recombinant human IL25 (Catalog # HF-1025) induces CXCL1/GRO alpha secretion in HT-29 human colon adenocarcinoma cells.

### Background

**Interleukin-25 (IL-25)**, which is also known as IL-17E, promotes Th2-biased immune responses. This is in contrast to other IL-17 family members which promote Th1- and Th17-biased inflammation. IL-25 is an important mediator of allergic reactions and protection against intestinal parasites (1, 2). Mature human IL-25 shares 80% amino acid sequence identity with mouse and rat IL-25 (3, 4). During helminth infections and allergic reactions, IL-25 is locally up-regulated in intestinal and airway epithelial cells, atopic dermatitis skin lesions, and local Th2 cells, eosinophils, and basophils (4-9). It binds to IL-17 RB but also requires IL-17 RA to exert its activity (3, 8, 10). IL-25 acts on a variety of cell types which respond with increased production of Th2 cytokines (e.g. IL-4, IL-5, IL-13) and reduced production of Th1 and Th17 cytokines (e.g. IFN-gamma, IL-12, IL-23, IL-17A, IL-17F) (4-6, 8, 9, 11-15). Airway IL-25 can be activated by MMP-7, a protease that is up-regulated in airway epithelium in response to allergen exposure (16). Cleaved IL-25 shows enhanced binding to IL-17 RB and stronger induction of Th2 cytokines (16). The Th2 cytokines, in turn, trigger expansion of Th2 memory cells and anti-inflammatory M2 macrophages, increased eosinophil mobilization and activation, and dendritic cell migration (4, 6, 9, 13). These actions promote protective anti-helminth immune responses (4, 5) as well as allergic inflammation and airway hyperreactivity (11). The IL-25 induced suppression of Th1 and Th17 cytokines limits Th17 cell expansion and disease pathology in autoimmunity and colitis [12, 14].

### Reference

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