

General Information

Synonyms	Human IL17A; hIL-17A, recombinant IL17A, interleukin 17A
Accession #	Q16552
Source	Human embryonic kidney cell, HEK293-derived human IL17A protein
	Gly24-Ala155
Predicted Molecular weight	15.1 kDa (Monomer)
Form/Structure	Dimer in solution

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.
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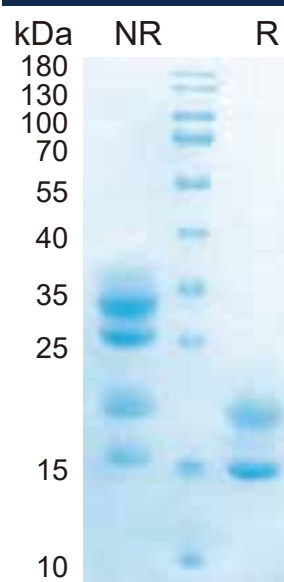
Storage and Stability	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 12 months from date of receipt, -20 to -70 °C as supplied.
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Shipping	Shipping with dry ice.
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Quality

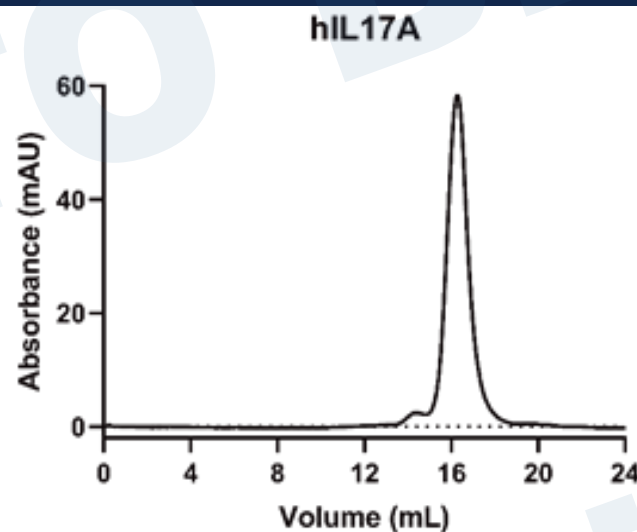
Purity	> 95%, determined by SDS-PAGE.
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method.
Activity	Measured by its ability to induce IL-6 secretion by NIH-3T3 mouse embryonic fibroblast cells. The ED50 for this effect is 1.0-7.5 ng/mL.

SDS-PAGE



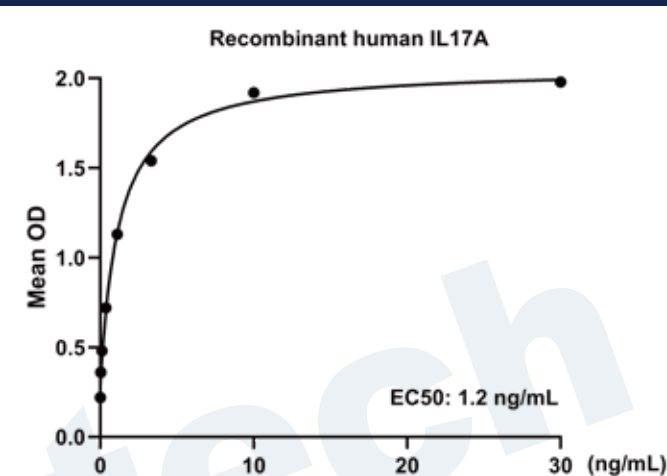
2 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie Blue staining.

Gel filtration



Size-exclusion chromatography of recombinant human IL17A protein (280 nm absorbance)

Bioactivity



Recombinant human IL17A (Catalog # HF-1017) induce IL-6 secretion by NIH-3T3 mouse embryonic fibroblast cells.

Background

Interleukin-17A (IL-17A), also known as CTLA-8, is a 15-20 kDa glycosylated cytokine that plays an important role in anti-microbial and chronic inflammation. The six IL-17 cytokines (IL-17A-F) are encoded by separate genes but adopt a conserved cystine knot fold (1, 2). Mature human IL-17A shares 60% amino acid sequence identity with mouse and rat IL-17A (3, 4). IL-17A is secreted by Th17 cells, gamma / delta T cells, iNKT cells, NK cells, LTi cells, neutrophils, and intestinal Paneth cells (2). It forms disulfide-linked homodimers as well as disulfide-linked heterodimers with IL-17F (5, 6). IL-17A exerts its effects through the transmembrane IL-17RA in complex with IL-17RC or IL-17RD (7, 8). Both IL-17RA and IL-17RC are required for responsiveness to heterodimeric IL-17A/F (7). IL-17A promotes protective mucosal and epidermal inflammation in response to microbial infection (9-12). It induces chemokine production, neutrophil influx, and the production of antibacterial peptides (9-11). IL-17A/F likewise induces neutrophil migration, but IL-17F does not (11). IL-17A additionally enhances the production of inflammatory mediators by rheumatoid synovial fibroblasts and contributes to TNF-alpha induced shock (4, 13). In contrast, it can protect against the progression of colitis by limiting chronic inflammation (12). IL-17A has been shown to exert either tumorigenic or anti-tumor effects (14, 15).

Reference

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