

Human Interleukin-17F (hIL-17F)

<input type="checkbox"/> SC 25 µg (With Carrier)	<input type="checkbox"/> SF 25 µg (Carrier Free)
<input type="checkbox"/> LC 100 µg (With Carrier)	<input type="checkbox"/> LF 100 µg (Carrier Free)

Multi-milligram quantities available

New 12/09



Cell Signaling
TECHNOLOGY®

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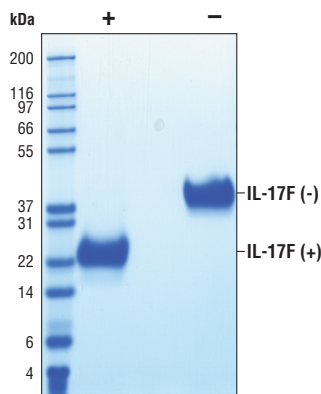
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Source: Recombinant human IL-17F (hIL-17F) Arg31-Gln163 (Accession #NP_443104) was expressed in human 293 cells at Cell Signaling Technology.

Molecular Characterization: Recombinant hIL-17F contains no "tags" and the nonglycosylated protein has a calculated MW of 14,903. DTT-reduced protein migrates as a 22 kDa polypeptide. Lower mobility in SDS-PAGE is due to glycosylation. The non-reduced cystine-linked homodimer migrates as a 38 kDa protein. The expected amino-terminal RKIPK of recombinant hIL-17F was verified by amino acid sequencing.

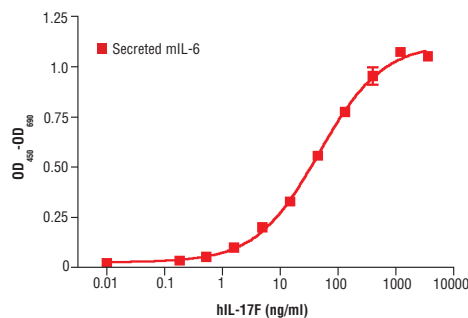
Endotoxin: Less than 0.01 ng endotoxin/1 µg hIL-17F.

Purity: >98% as determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant hIL-17F. All lots are greater than 98% pure.



The purity of recombinant hIL-17F was determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant hIL-17F and staining overnight with Coomassie Blue.

Bioactivity: The bioactivity of recombinant hIL-17F was determined by its ability to induce mouse IL-6 production by 3T3 MEFs WT. The ED₅₀ of each lot is between 30-80 ng/ml.



The production of mouse IL-6 by 3T3 MEFs WT cultured with increasing concentrations of hIL-17F was assessed. Media from cells incubated with hIL-17F for 24 hours was collected and assayed for mouse IL-6 by ELISA and the OD₄₅₀-OD₆₅₀ was determined.

Formulation: With carrier: Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.2 containing 20 µg BSA per 1 µg hIL-17F.

Carrier free: Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.2.

Reconstitution:

With carrier: Add sterile PBS, or PBS containing 1% bovine or human serum albumin or 5-10% FBS to a final hIL-17F concentration of greater than 50 µg/ml. Solubilize for 30 minutes at room temperature with occasional gentle vortexing.

Carrier free: Add sterile PBS, or PBS containing protein to minimize absorption of hIL-17F to surfaces. Solubilize for 30 minutes at room temperature with occasional gentle vortexing. Stock hIL-17F should be greater than 50 µg/ml.

Storage: Stable in lyophilized state at 4°C for 1 year after receipt. Sterile stock solutions reconstituted with carrier protein are stable at 4°C for 2 months and at -20°C for 6 months. Avoid repeated freeze-thaw cycles.

Maintain sterility. Storage at -20°C should be in a manual defrost freezer.

Applications: Optimal concentration for the desired application should be determined by the user.

Background: IL-17F is a cystine-linked homodimeric pro-inflammatory cytokine produced by TH17 cells, a distinct CD4+ T cell subset (1). IL-17F induces the production of pro-inflammatory cytokines, antimicrobial peptides, and neutrophil chemoattractants such as IL-6, β-defensin, IL-8, CXCL1, and CXCL6 (1,2). As a result, IL-17F may provide an important link between adaptive and the innate immunity. IL-17F binds with high affinity to IL-17RC, expressed primarily in non-hematopoietic tissues, and with lesser affinity to IL-17RA, which is expressed in hematopoietic tissues (3). IL-17F binding activates the ERK1/2 MAP kinase and NF-κB pathways (1,4). IL-17F appears to be involved in mucosal immunity against bacterial infections and possibly some autoimmune conditions (1,5,6).

Background References:

- (1) Kolls, J.K. and Lindén, A. (2004) *Immunity* 21, 467-76.
- (2) Liang, S.C. et al. (2006) *J Exp Med* 203, 2271-9.
- (3) Kuestner, R.E. et al. (2007) *J Immunol* 179, 5462-73.
- (4) Kawaguchi, M. et al. (2002) *J Biol Chem* 277, 15229-32.
- (5) Zrioual, S. et al. (2009) *J Immunol* 182, 3112-20.
- (6) Ishigame, H. et al. (2009) *Immunity* 30, 108-19.

Material Safety Data Sheet (MSDS) for Human Interleukin-17F (hIL-17F)



I. Identification:

Product name: Human Interleukin-17F (hIL-17F)
Product Catalog: 8906
CAS#: n/a
Manufacturer Supplier: Cell Signaling Technology
 3 Trask Lane
 Danvers, MA 01923 USA
 978-867-2300 TEL
 978-867-2400 FAX
 978-578-6737 EMERGENCY TEL

Substance Name: Interleukin-17F (hIL-17F), human, recombinant

Ingredients:	Carrier-Free	With Carrier	CAS#
Human Interleukin-17F, recombinant	98%	5%	n/a
Bovine serum albumin	0%	95%	9048-46-8

II. Composition/Information:

This product is a lyophilized mixture of proteins. According to 29 CFR 1910.1200(d), mixtures with hazardous ingredients at less than <1% and carcinogens at less than <0.1% are considered non-hazardous.

III. Hazard Identification:

This product is not for use in humans. It is intended for research purposes only.
 To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been established.

IV. First Aid Measures:

Inhalation: If inhaled, remove to fresh air. If breathing is difficult, get medical attention.
Ingestion: If swallowed, wash out mouth with water provided person is conscious. Get medical attention.
Skin exposure: In case of contact, immediately wash skin with soap and water for at least 15 minutes. Remove contaminated clothing. Wash clothing before reuse.
Eye exposure: In case of contact with eyes, immediately flush eyes with water for at least 15 minutes. Get medical attention.

V. Fire Fighting Measures:

Flash Point: Data not available.
Autoignition Temperature: Data not available.
Explosion: Data not available.
Fire extinguishing media: Water spray, dry chemical, alcohol foam, or carbon dioxide.
Firefighting: Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes. May emit toxic fumes under fire conditions.

VI. Accidental Release Measures: Wear appropriate personal protective equipment. Sweep up material and avoid raising dust. Transfer to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

VII. Handling And Storage:

Store in tightly closed container at 4°C. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

VIII. Exposure Controls/Personal:

Ventilation System: A system of local and/or general exhaust is recommended.
Skin Protection: Wear compatible chemical resistant gloves and protective clothing.
Eye protection: Wear protective safety glasses or chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

IX. Physical And Chemical Properties

Appearance: lyophilized powder
pH: data not available
Melting Point: data not available
Boiling Point: data not available
Freezing Point: data not available
Volatile Organic Compounds: data not available
Solubility in water: soluble

X. Stability and Reactivity:

Stability: Stable under normal conditions.
Conditions/materials to avoid: Data not available.
Hazardous Decomposition: Data not available.

XI. Toxicological Information:

Acute Effects: Data not available.
Chronic Effects: Data not available.
Potential Health Effects: Not established.
Inhalation: May be harmful, may be irritating to mucous membranes and upper respiratory tract.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.

XII. Ecological Information:

XIII. Disposal Considerations: Dispose of in accordance with federal, state and local environmental regulations.

XIV. Transport Information:

DOT: This substance is considered Non-Hazardous for transport.
IATA: This substance is considered Non-Hazardous for air transport.

XV. Regulatory Information:

EU Regulations/Classifications/Labeling Information: None.
US Regulatory Information:
SARA Listed: No.
Canada (WHMIS): DSL No, NDSL No.

XVI. Other Information:

This compound is sold for research use only. It is not for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.