Sterile

#5227

Mouse Interleukin-17A (mIL-17A)

☐ SC 10 µg (With Carrier)
☐ SF 10 µg (Carrier Free)
☐ LC 50 µg (With Carrier)
☐ LF 50 µg (Carrier Free)

Multi-milligram quantities available

New 06/10

Cell Signaling TECHNOLOGY®

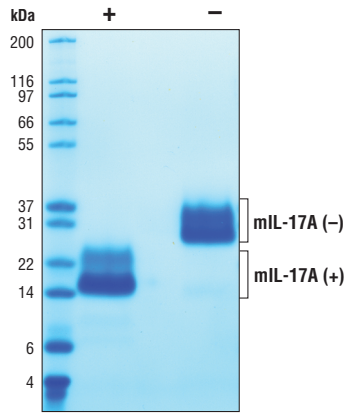
Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

Source: Recombinant mouse IL-17A (mIL-17A) Thr22-Ala158 (Accession #NP_034682) was expressed in human 293 cells at Cell Signaling Technology.

Molecular Characterization: Recombinant mIL-17A contains no "tags" and the nonglycosylated protein has a calculated MW of 15,377. DTT-reduced protein migrates as a 15-22 kDa polypeptide. Heterogeneity in SDS PAGE is due to glycosylation. The non-reduced cystine-linked homodimer migrates as a 28-36 kDa protein. The expected amino-terminal TVKAA of recombinant mIL-17A was verified by amino acid sequencing.

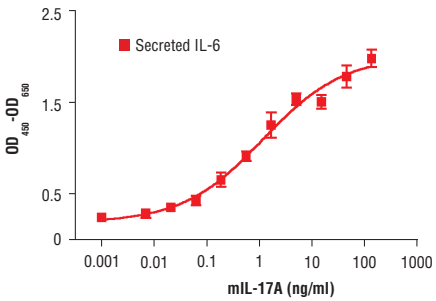
Endotoxin: Less than 0.01 ng endotoxin/1µg mIL-17A.

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

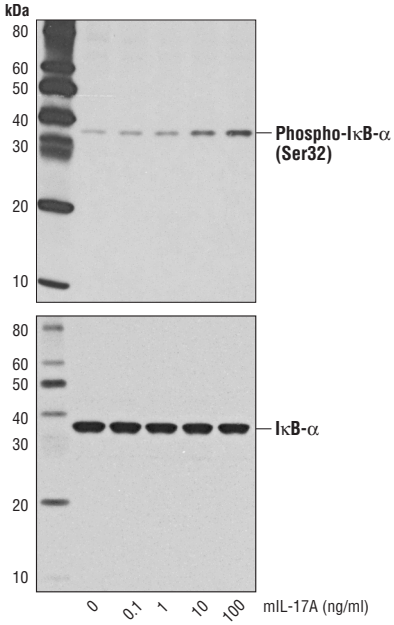


The purity of recombinant mIL-17A was determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant mIL-17A and staining overnight with Coomassie Blue.

Bioactivity: The bioactivity of recombinant mIL-17A was determined by its ability to induce mouse IL-6 production by 3T3 MEFs WT. The ED_{50} of each lot is between 0.4-1.4 ng/ml.



◀ *The production of mouse IL-6 by 3T3 MEFs WT cultured with increasing concentrations of mIL-17A was assessed. Media from cells incubated with mIL-17A for 24 hours was collected and assayed for mouse IL-6 by ELISA and the OD_{450}-OD_{650} was determined.*



Western blot analysis of extracts from 3T3 MEFs WT untreated or treated with mIL-17A for 10 minutes, using Phospho-IκB-α (Ser32) (14D4) Rabbit mAb #2859 (upper) and IκB-α (L35A5) Mouse mAb #4814 (lower).

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

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 mIL-17A 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 mIL-17A to surfaces. Solubilize for 30 minutes at room temperature with occasional gentle vortexing. Stock mIL-17A 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-17A is a cystine-linked homodimeric pro-inflammatory cytokine produced by TH_{17} cells, a distinct CD4+ T cell lineage (1,2). IL-17A stimulates the production of the pro-inflammatory cytokines IL-1β, TNFα, and IL-6. IL-17A also induces production of the neutrophil chemoattractants IL-8, CXCL1, and CXCL6 thereby bridging adaptive and innate immunity (1,2). IL-17A is intimately involved in mucosal immunity against bacterial infections (1,3) and has a putative role in some autoimmune disorders (1,4). IL-17A effects appear to be exerted primarily through binding to the IL-17RA (5). IL-17A binding induces production of cytokines, chemokines and other proteins through activation of the ERK1/2 MAP kinase, PI3K/Akt, p38, and NF-κB pathways (3,4,6). Phosphorylation of some Jaks and Stats has been observed.

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) Dubin, P.J. and Kolls, J.K. (2008) *Immunol Rev* 226, 160-71.

(4) Zrioual, S. et al. (2009) *J Immunol* 182, 3112-20.

(5) Wright, J.F. et al. (2008) *J Immunol* 181, 2799-805.

(6) Rahman, M.S. et al. (2006) *J Immunol* 177, 4064-71.

#5227 MSDS

Material Safety Data Sheet (MSDS) for Mouse Interleukin-17A (mIL-17A)

Cell Signaling TECHNOLOGY®

I. Identification:

Product name: Mouse Interleukin-17A (mIL-17A)
Product Catalog: 5227
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

II. Composition/Information:

Substance Name: Interleukin-17A, mouse, recombinant, from 293 cells

Synonym: mIL-17A

CAS#: n/a

III. Hazard Identification:

!! CAUTION: This product is not for use in humans. It is intended for Research Use Only. To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been established.

EMERGENCY OVERVIEW
OSHA: No known hazards. This substance is not classified as dangerous according to Directive 67/548/EEC.

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 inhalation. 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
Flash Point:	data not available
Boiling Point:	data not available
Freezing Point:	data not available
Volatile Organic Compounds:	data not available
Solubility in water:	soluble in water

X. Stability and Reactivity:

Stability: Stable under normal conditions.
Conditions to avoid: Strong oxidizing agents
Hazardous Decomposition: Data not available.

XI. Toxicological Information:

Acute Effects: Not established.
Chronic Effects: Not established.
Potential Health Effects: Not established.
Inhalation: May be harmful if inhaled.
Skin: May be harmful if absorbed through skin.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.

XII. Ecological Information: No data available.

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

XIV. Transport Information:

DOT: Not dangerous goods.
ADR/RID: Not dangerous goods.
IMDG: Not dangerous goods.
IATA : Not dangerous goods.

XV. Regulatory Information:

Labeling according to EC Directives:
This product does not need to be labeled, in accordance with EC Directives or respective laws.
US Regulatory Information:
SARA Listed: No.
Canada (WHMIS): DSL No, NDSL No.

XVI. Other Information:

This compound is sold only 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.