Human Interleukin-4 (IL-4)

☑ 10 µg

Store at -20°C

Entrez-Gene ID #3565
Swiss-Prot Acc. #P05112

Molecular Wt. | Source | Purity
---|---|---
15 kDa | Human Recombinant Protein | >98%

Background: Interleukin-4 (IL-4) is a cytokine secreted by activated primarily in activated T-cells, basophils, and mast cells (1,2). While it contributes to many immunomodulatory responses, it’s mainly recognized as the cytokine responsible for eliciting differentiation of naïve T-cells into Th2 lineage cells that are defined by their secretion of IL-4, IL-5, and IL-10 (3). In addition, IL-4 contributes to immunoglobulin class switching by inducing the production of IgE from B-cells (4,5). IL-4 acts through the IL-4 receptor leading to tyrosine phosphorylation and activation of the Stat6 transcription factor (6).

Source/Purification: Recombinant human IL-4 was expressed in E. coli and is supplied in a lyophilized form. A greater than 98% purity was determined by reverse phase-HPLC and SDS-PAGE.

Specific Activity: The specific activity is 5 X 10^6 IU/mg.

Directions for Use: The working concentration generally ranges from 10-50 ng/ml.

Background References:

Storage: Lyophilized product is very stable at -20ºC. It is recommended to reconstitute with sterile water at a concentration of 0.1 mg/ml which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long term storage.

Companion Products:
- Phospho-Stat6 (Tyr641) (C11A12) Rabbit mAb #9364
- Phospho-Stat6 (Tyr641) Antibody #9361
- Stat6 Antibody #9362
- Interleukin-2 #2166
- Interleukin-6 (IL-6) #9954
- Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
- Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder Detection Pack #7727
- 20X LumiGLO® Reagent and 20X Peroxide #7003

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Western blot analysis of extracts from ACHN cells treated with various concentrations of Human Interleukin-4 (IL-4) for 15 minutes using Phospho-Stat6 (Tyr641) (C11A12) Rabbit mAb #9364 (upper) and total Stat6 Antibody #9362 (lower).
Material Safety Data Sheet (MSDS) for
IL-4

I. Identification:
Product name: IL-4
Product Catalog: 3836
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-4
CAS#: 207137-56-2

III. Hazard Identification:
CAUTION: This product is not for use in humans. To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been established.
No known OSHA hazards.

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 as indicated in Section VIII. 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:
Storage: Store in tightly closed container at -20°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: 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: data not available

X. Stability and Reactivity:
Stability: Very stable under normal conditions.
Materials to avoid: Strong oxidizing agents.
Hazardous Decomposition: Data not available.

XI. Toxicological Information:
Acute Effects: May cause irritation inhaled, ingested or absorbed.
Chronic Effects: May be harmful if inhaled, ingested or absorbed.
Potential Health Effects:
Inhalation: May be harmful if inhaled.
Skin: May be harmful if absorbed through skin.
Eyes: May be harmful, may cause eye irritation.
Ingestion: May be harmful if swallowed.
To the best of our knowledge, the chemical, physical, and toxicological properties of this solution have not been thoroughly investigated.

XII. Ecological Information:
Data not available.

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

XIV. Transport Information:
DOT: Proper Shipping Name: None. This substance is considered non-hazardous for transport.
IATA: Proper Shipping Name: None. This substance is considered non-hazardous for air transport.

XV. Regulatory Information:
EU Regulations/Classifications/Labeling Information: None.
US Regulatory Information: None.

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.