9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

IL 4 Human

Interleukin-4 Human Recombinant
CYK0329

Product Overview

Name	IL 4 Human
Description	
Interleukin-4 Human Recombinant	
Accession (Primary)	P05112
Synonyms	
BCGF, BCDF, B cell stimulating factor, BSF-1, Lymphocyte stimulatory factor 1, IL-4, MGC79402, Binetrakin, Pitrakinra.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered White lyophilized (freeze-dried) powder.	
Formulation	
IL-4 was lyophilized from a 0.2 µm filtered concentrated (1mg/ml) solution in PBS, pH 7.4.	
Stability	
Lyophilized Interleukin-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL-4 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.	
Purity	
Greater than 97.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.	
Amino acid sequence	
MHKCDITLQE IIKTLNSLTE QKTLCTELTV TDIFAASKNT TEKETFCRAA TVLRQFYSHH EKDTRCLGAT AQQFHRHKQL IRFLKRLDRN LWGLAGLNSC PVKEANQSTL ENFLERLKTI MREKYSKCSS.	
Biological Activity	
The ED50 as determined by the dose-dependant stimulation of TF-1 cells is < 0.2 ng/ml, corresponding to a Specific Activity of 5,000,000 IU/mg.	
Solubility	
It is recommended to reconstitute the lyophilized IL-4 in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.	

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Background

Everything You Should Know About IL-4 Human Recombinant Interleukin-4 (IL-4) is an important type-2 cytokine with multiple effects on numerous cells and tissues in the body. As such, it's crucial for the immune system's maintenance and function. Recent advancements have led to the development of interleukin-4 (rhIL-4) human recombinant in laboratories. As a result, experts have started studying its potential uses and therapeutic applications. If you're interested in learning more about IL-4 human recombinant, check out the information below! How Does Interleukin-4 (IL-4) Work? Interleukin-4 (IL-4) acts as a signaling molecule, specifically a protein. It communicates with various immune cells by binding to specific receptors on their surface. This process triggers responses against common threats, such as allergens, contaminants, and infections. IL-4 is produced by T helper 2 (Th2) cells (a type of white blood cells), mast cells, eosinophils, and basophils. What Interleukin-4 (IL-4) Does As mentioned, this type-2 cytokine has multiple effects on various cells and tissues, so it fulfills several functions. Below are the most important ones: Th2 cell differentiation: IL-4 promotes the differentiation of T cells, triggering the response of Th2 cells, which fight parasites and regulate allergic responses. B cell activation and antibody production: IL-4 stimulates B cells, helping them proliferate and produce antibodies, particularly immunoglobulin E (IgE), which is involved in allergic reactions. Inflammation reduction: IL-4 can promote inflammation to address threats, such as allergens or parasites, and suppress it when necessary, depending on the context. Tissue repair and remodeling: IL-4 is key for tissue repair and remodeling processes, such as wound healing and fibrosis. What Is IL-4 Human Recombinant? IL-4 human recombinant is a version produced in a laboratory using DNA technology. The cytokine is inserted into a host organism, commonly E. Coli bacteria, for mass production. This method allows experts to obtain pure and contaminant-free rhIL-4 with uniform biological activity and in large quantities. What Can IL-4 Human Recombinant Be Used For? Since this cytokine plays a key role in different processes, it may have multiple therapeutic applications for numerous diseases. These are the most common: Allergic diseases, such as asthma, rhinitis, and eczema Autoimmune diseases, such as rheumatoid arthritis and multiple sclerosis Infectious diseases, including those caused by parasites and viruses Cancer, as research suggests IL-4 could enhance the immune system's ability to fight cancer cells Final Thoughts The future of IL-4 human recombinant seems promising. This laboratory-produced version of an essential type-2 cytokine may be key to developing innovative therapies. However, more research is needed on potential applications to determine if it's safe and effective.

Protein content

Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 0.594 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics). 2. Analysis by RP-HPLC, using a standard solution of IL-4 as a Reference Standard.

Precautions

IL 4 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P05112)

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