

IL 4 Human

Interleukin-4 Human Recombinant

CYK0329

Product Overview

Name	IL 4 Human
Accession(Primary)	P05112
Description	Interleukin-4 Human Recombinant

Target information (P05112)

Gene Name

About Gene Symbol

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.