

IL 2 Human

Interleukin-2 Human Recombinant

CYK0289

Product Overview

Name	IL 2 Human
Accession(Primary)	P60568
Description	Interleukin-2 Human Recombinant

Target information (P60568)

Gene Name

About Gene Symbol

Background

IL 2 HUMAN: A Vital Tool for Advancing Immunotherapy Research IL 2 HUMAN refers to the human form of Interleukin-2, a critical cytokine in the immune system. This protein is crucial for the growth and activity of T and B lymphocytes, the cells responsible for the body's immune defense against infections. By promoting the growth of these cells, IL 2 plays a vital role in maintaining and activating the immune response.

Production and Characteristics Typically, IL 2 is produced through recombinant DNA technology using E. coli bacteria. This method allows for creating large quantities of pure and functional IL 2 protein. The product appears as a sterile, white lyophilized powder that is non-glycosylated and consists of 133 amino acids with a molecular mass of approximately 15.4 kDa.

Reconstituting IL-2 Human for Laboratory Use To dissolve the lyophilized IL-2 effectively, it should be reconstituted with sterile distilled water to achieve a minimum 100 µg/ml concentration. This makes the protein readily usable for further experimental procedures. Moreover, the concentration allows for easy adjustment in solubility and ensures optimal conditions for the protein's activity in various research setups. Proper dissolution and storage are crucial to maintain the protein's functionality and stability.

Storage and Stability The stability of IL 2 is dependent on its storage conditions. When

lyophilized, it can remain stable at room temperature for up to three weeks, but for long-term storage, it should be kept desiccated below -18°C . Once reconstituted, IL 2 should be used within a week if kept at 4°C , or it can be stored at below -18°C for future use. It's important to avoid freeze-thaw cycles, which can degrade the protein. Purity and Biological Activity IL 2 HUMAN's purity is generally greater than 97%, confirmed by reverse-phase high-performance liquid chromatography (RP-HPLC) and SDS-PAGE analyses. Its biological activity is evaluated by its ability to stimulate the proliferation of murine CTLL-2 cells, with an effective dose (ED50) typically less than 0.1 ng/ml. This indicates a very high specific activity, making it highly potent and effective in research settings.

Applications in Research IL 2 is used extensively in research, particularly in studies focusing on the immune system, autoimmune diseases, and cancer. Furthermore, its role in T-cell growth and function makes it invaluable for developing new therapeutic strategies and understanding immune response mechanisms.

Important Considerations It is important to remember that IL 2, like all cytokines used in research, is intended for laboratory use only. This protein is not suitable for drug, food, or cosmetic applications. Proper handling and usage instructions must be followed to ensure safety and efficacy in research environments. Essentially, IL 2 HUMAN is a vital tool in immunological research, offering insights into the complex workings of the immune system and providing avenues for potential therapeutic developments. The careful production, handling, and storage of IL 2 are crucial for its effective use in laboratory settings.

References for protein:

1. Title :CD8 Kinetically Promotes Ligand Binding to the T-Cell Antigen Receptor. Publication :Biophysical Journal Volume 89 September 2005 2121-2133. Link : IL 2 prospec publication
2. Title: Detection of expressed IL-32 in human stomach cancer using ELISA and immunostaining Publication: J Microbiol Biotechnol 18.9 (2008): 1606-1612. Link: <http://www.jmb.or.kr/submission/Journal/018/JMB018-09-19.pdf>
3. Title: Conservation of cytokine-mediated responses in innate immunity: a flow cytometric study investigating the effects of human proinflammatory cytokines on phagocytosis in the earthworm *Eisenia hortensis* Publication: Invertebrate Survival Journal 5 (2008): 124-134. Link: Interleukin-2 prospec publication