

Recombinant Human IL2 Protein (Ala21-Thr153), Biotinylated

Cat. No. IL2-1118H **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant Human IL2 Protein (P60568-1) (Ala21-Thr153) was produced by E. coli expression system. This protein was expressed and purified, with an initial Met. The purified protein was biotinylated in vitro.

Species Human

Source E.coli

ProteinLength Ala21-Thr153

Description Interleukin-2, also known as T-cell growth factor, TCGF, Aldesleukin and IL2, is a secreted protein which belongs to the IL-2 family. Interleukin-2 / IL-2 was the first interleukin molecule to be discovered. Interleukin-2 / IL-2 molecule was first purified to homogeneity by immunoaffinity chromatography by Kendall Smith and his team at Dartmouth Medical School. Interleukin-2 / IL-2 was also the first cytokine shown to mediate its effects via a specific IL-2 receptor, and it was also the first interleukin to be cloned and expressed from a complementary DNA (cDNA) library. Interleukin-2 / IL-2 was designated number 2 because Smith's data at the time indicated that IL-1, produced by macrophages, facilitates IL-2 production by T lymphocytes (T cells). Interleukin-2 / IL-2 is produced by T-cells in response to antigenic or mitogenic stimulation, this protein is required for T-cell proliferation and other activities crucial to regulation of the immune response. Interleukin-2 / IL-2 is normally produced by the body during an immune response. When environmental substances (molecules or microbes) gain access to the body, these substances (termed antigens) are

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recognized as foreign by antigen receptors that are expressed on the surface of lymphocytes. Antigen binding to the T cell receptor (TCR) stimulates the secretion of Interleukin-2 / IL-2, and the expression of IL-2 receptors IL-2R. The IL-2 / IL-2R interaction then stimulates the growth, differentiation and survival of antigen-selected cytotoxic T cells via the activation of the expression of specific genes. Interleukin-2 / IL-2 can stimulate B-cells, monocytes, lymphokine-activated killer cells, natural killer cells, and glioma cells. The World Reference Standard for Interleukin-2 / IL-2 is produced by the National Institute of Biological Standards and Control in the UK. A recombinant form of Interleukin-2 / IL-2 for clinical use is manufactured by Chiron Corporation with the brand name Proleukin. It has been approved by the Food and Drug Administration (FDA) for the treatment of cancers (malignant melanoma, renal cell cancer), and is in clinical trials for the treatment of chronic viral infections, and as a booster (adjuvant) for vaccines. The use of Interleukin-2 / IL-2 in HIV therapy has been found to be ineffective.

Predicted N Terminal

Met

Form

Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.

Molecular Mass

The recombinant human IL-2 consists of 134 amino acids and has a calculated molecular mass of 15.5 kDa as predicted in SDS-PAGE under reducing conditions.

Purity

> 95 % as determined by SDS-PAGE.

Stability

Samples are stable for up to twelve months from date of receipt at -70 centigrade.

Storage

Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

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Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 mg/ml. Centrifuge the vial at 4°C before opening to recover the entire contents.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.
Conjugation	Biotin

GENE INFORMATION

Gene Name	IL2 interleukin 2 [Homo sapiens]
Official Symbol	IL2
Synonyms	IL2; interleukin 2; interleukin-2; IL 2; T cell growth factor; TCGF; aldesleukin; IL-2; lymphokine;
Gene ID	3558
mRNA Refseq	NM_000586
Protein Refseq	NP_000577
MIM	147680
UniProt ID	P60568

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