

Recombinant Human IL-2 Protein

Catalog Number: TL-777

Product name

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| Generic names | Recombinant Human IL-2 Protein |
| Gene Name Synonym | IL-2, Interleukin-2, lymphokine, TCGF, Aldesleukin. |

Product information

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| Construction | A DNA sequence encoding A DNA sequence encoding human IL2 (NP_000577.2) (Cys-125-Ala) was expressed with the C-terminal fused Fc region of human IgG1. |
| Source | Human |
| Expression Host | CHO cells |
| QC Testing Purity | > 95 % as determined by SDS-PAGE |
| Bio Activity | The ED ₅₀ as determined by the dose-dependent stimulation of murine CTLL-2 cells is ≤ 0.1ng/ml, corresponding to a specific activity of ≥ 1x10 ⁷ units/mg. |
| Endotoxin | <0.01 EU per mg of the protein as determined by the LAL method. |
| Molecular Mass | The Recombinant Human IL-2 consists of 365 amino acids and predicts a molecular mass of 41.6KDa. |
| Formulation | Lyophilized from sterile PBS, pH 7.4. Normally 6% - 8% trehalose, mannitol are added as protectants before lyophilization. |
| Stability & Storage | Samples are stable for up to 24 months from date of receipt at 4°C. Recommend to aliquot the protein into smaller quantities for optimal storage. Avoid repeated freeze-thaw cycles. |

Background

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/IL2 was the first interleukin molecule to be discovered. 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 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 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/IL2 is produced by the National Institute of Biological Standards and Control in the UK.

References

1. Smith KA, et al., 1980, J. Exp. Med. 151 (6): 1551-6.
2. Smith KA, et al., 1980, Nature. 287 (5785): 853-5.
3. Taniguchi T, et al., 1983, Nature. 302 (5906): 305.