

Recombinant Human IL-4 Protein

Catalog Number: TL-301

Product name

Generic names	Recombinant Human IL-4 Protein
Gene Name Synonym	BCGF, BCDF, B cell stimulating factor (BSF-1).

Product information

Construction	A DNA sequence encoding the extracellular domain of human IL-4 (P05112-1) was expressed with the C-terminal fused Fc region of human IgG1.
Source	Human
Expression Host	CHO cells
QC Testing Purity	> 90 % as determined by SDS-PAGE
Bio Activity	The ED ₅₀ as determined by the dose-dependent stimulation of murine D10S cells is ≤ 0.1 ng/ml, corresponding to a specific activity of ≥ 1 x 10 ⁷ units/mg.
Endotoxin	< 0.1EU per µg of the protein as determined by the LAL method.
Molecular Mass	The recombinant human IL-4 consists of 364 amino acids and predicts a molecular mass of 40KDa.
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

IL-4 is a pleiotropic cytokine that regulates diverse T and B cell responses including cell proliferation, survival and gene expression. Produced by mast cells, T cells and bone marrow stromal cells, IL-4 regulates the differentiation of naive CD4⁺ T cells into helper Th2 cells, characterized by their cytokine-secretion profile that includes secretion of IL-4, IL-5, IL-6, IL-10, and IL-13, which favor a humoral immune response. Another dominant function of IL-4 is the regulation of immunoglobulin class switching to the IgG1 and IgE isotypes. Excessive IL-4 production by Th2 cells has been associated with elevated IgE production and allergy.

References

1. Grunewald SM. et al., 1998, J Immunol. 160 (8): 4004-9.
2. Susanne M. et al, 1997, THE JOURNAL OF BIOLOGICAL CHEMISTRY. 272 (3): 1480- 3.
3. Nishikubo K. et al., 2003, Gene Ther. 10 (26): 2119-25.