

IL-3 Protein, Human, Recombinant (His)

General Information

Synonyms:	IL-3;interleukin 3;Interleukin-3;MULTI-CSF;MCGF
Protein Construction:	A DNA sequence encoding the human IL3 (NP_000579.2) (Met1-Phe152) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Ala 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P08700
Molecular Weight:	16.5 kDa (predicted)

QC Testing

Biological Activity:	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is typically 0.5-2.5ng/mL.
Purity:	> 95 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

IL3 (interleukin 3), also known as IL-3, is a potent growth-promoting cytokine that belongs to the IL-3 family. IL3/IL-3 also belongs to the group of interleukins. Interleukins are produced by a wide variety of body cells. The function of the immune system depends in a large part on interleukins, and rare deficiencies of a number of them have been described, all featuring autoimmune diseases or immune deficiency. The majority of interleukins are synthesized by helper CD4+ T lymphocytes, as well as through monocytes, macrophages, and endothelial cells.

A DRUG SCREENING EXPERT

They promote the development and differentiation of T, B, and hematopoietic cells. IL3/IL-3 is capable of supporting the proliferation of a broad range of hematopoietic cell types. It is involved in a variety of cell activities such as cell growth, differentiation, and apoptosis. IL3/IL-3 has been shown to also possess neurotrophic activity, and it may be associated with neurologic disorders.

Reference

Meyer CG, et al.. (2011) IL3 variant on chromosomal region 5q31-33 and protection from recurrent malaria attacks. Hum Mol Genet. 20(6):1173-81.

Zambrano A, et al.(2010) IL-3 controls tau modifications and protects cortical neurons from neurodegeneration. Curr Alzheimer Res. 7(7):615-24.

Dentelli P, et al.. (2011) IL-3 is a novel target to interfere with tumor vasculature. Oncogene. 30(50):4930-40.

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