

Recombinant Human IL-3 Protein

Size / Cat.No.: 50µg / GMP-TL511-0050

100µg / GMP-TL511-0100

Product Name

Generic Name	Recombinant Human IL-3 Protein
Synonym	MCGF(Mast cell growth factor), Multi-CSF, HCGF, P-cell stimulation factor

Product Information

Protein sequence	A DNA sequence encoding the human IL-3 (GenBank: AAA59146.1) was expressed with a His-tag at the C-terminus.
Expression Host	HEK293 cells
QC Testing Purity	> 90 % as determined by SDS-PAGE.
Activity	Measured in a cell proliferation assay using TF-1 cells, activity $\geq 2.0 \times 10^5$ IU/mg.
Endotoxin	< 0.1EU per 1 µg of the protein by the LAL method.
Molecular Mass	The recombinant human IL-3 protein consists of 139 amino acids and predicts a molecular mass of 15.9 kD.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 6 % mannitol are added as protectants before lyophilization.
Stability & Storage	Lyophilized preparation can be stored at -20°C. 6 months at -20°C under sterile conditions after reconstitution. 12 months at -80°C under sterile conditions after reconstitution. Recommend to aliquot the protein into smaller quantities after reconstituting with water for injection, normal saline or PBS, and keep the diluted concentration above 100µg/mL. Avoid repeated freeze-thaw cycles.

Background

IL-3 is a hematopoietic growth factor that promotes the survival, differentiation, and proliferation of megakaryocytes, granulocyte-macrophages, erythrocytes, eosinophils, basophils, and progenitors of the mast cell line. IL-3 is produced by T cells, mast cells, and eosinophils and enhances platelet production, phagocytosis, and antibody-mediated cytotoxicity. Its ability to activate monocytes suggests that IL-3 may have additional immunity epidemic regulation. Much of the activity of IL-3 depends on costimulation with other cytokines. IL-3 is a species-specific, mutable glycosylated cytokine.

References

1. Loss of solute carrier family 7 member 2 exacerbates inflammation-associated colon tumorigenesis. Coburn LA, Singh K, Asim M, Barry DP, Allaman MM, Al-Greene NT, Hardbower DM, Polosukhina D, Williams CS, Delgado AG, Piazuelo MB, Washington MK, Gobert AP, Wilson KT. *Oncogene*. 2018 Sep 10. doi: 10.1038/s41388-018-0492-9.
2. Irreversible effects of trichloroethylene on the gut microbial community and gut-associated immune responses in auto immune-prone mice. Khare S, Gokulan K, Williams K, Bai S, Gilbert KM, Blossom SJ. *J Appl Toxicol*. 2018 Sep 5. doi: 10.1002/jat.3708.
3. Comparative utility of NRG and NRGS mice for the study of normal hematopoiesis, leukemogenesis, and therapeutic response. Barve A, Casson L, Krem M, Wunderlich M, Mulloy JC, Beverly LJ. *Exp Hematol*. 2018 Aug 17. pii: S0301-472X(18)30751-3. doi: 10.1016/j.exphem.2018.08.004.