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IL-3

Catalog # PVGS1427

Product Information

Primary Accession	P04823
Species	Rat
Sequence	Ile27-Cys166
Purity	> 95% as analyzed by SDS-PAGE
Endotoxin Level	
Biological Activity	ED_{50}
Expression System	CHO
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 □g/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Additional Information

Other Names	Interleukin-3, IL-3, Hematopoietic growth factor, Mast cell growth factor, MCGF, Multipotential colony-stimulating factor, P-cell-stimulating factor, Il3, Il-3
Target Background	Interleukin-3 (IL-3), also known as MCGF, Multi-CSF, HCGF and P-cell stimulation factor, belongs tothe α-helixfamily of hematopoietic cytokines. It is produced by activated T-cells, mast cells and natural killer cells. IL-3 binds to the IL-3 receptor alpha subunit and recruits the signal-transducing common beta chain. IL-3induced signal transduction results in the survival, differentiation and proliferation of a variety of immune cells, such as macrophages, neutrophils, megakaryocytes, mast cells and hematopoietic stem cells. IL-3 often acts synergistically with other cytokines, such as IL-7, EPO, GM-CSF and IL-6, to exert its simulative function.

Protein Information

Name	Il3

Synonyms	Il-3
Function	Cytokine secreted predominantly by activated T-lymphocytes as well as mast cells and osteoblastic cells that controls the production and differentiation of hematopoietic progenitor cells into lineage- restricted cells. Also stimulates mature basophils, eosinophils, and monocytes to become functionally activated. In addition, plays an important role in neural cell proliferation and survival. Participates as well in bone homeostasis and inhibits osteoclast differentiation by preventing NF-kappa-B nuclear translocation and activation (PubMed:34183475). Mechanistically, exerts its biological effects through a receptor composed of IL3RA subunit and a signal transducing subunit IL3RB (By similarity). Receptor stimulation results in the rapid activation of JAK2 kinase activity leading to STAT5-mediated transcriptional program. Alternatively, contributes to cell survival under oxidative stress in non-hematopoietic systems by activating pathways mediated by PI3K/AKT and ERK (By similarity).
Cellular Location	Secreted.
Tissue Location	Activated T-cells, mast cells, natural killer cells