Recombinant Human Interleukin 3

Catalog Number: SJB04
Strength: 10μg, 100μg

Specifications and Use

Source	● Yeast
Molecular Mass	● Approximately 15-25 kD, glycosylated protein.
Purity	● ≥97%.
Endotoxin Level	● <1EU/μg, determined by the LAL method.
Biological Activity	● Measured in a cell proliferation assay using TF-1 cells. The specific activity shall be not less than 3×10^7IU/mg.
Formulation	● Lyophilized from a 0.2μm filtered solution in PBS, pH7.4.
Reconstitution	● It is recommended to reconstitute the lyophilized rHuIL-3 in 0.2ml sterile water.
Storage	● Lyophilized samples are stable for 36 months from date of manufacture at -20℃ to -70℃. ● Upon reconstitution, this cytokine can be stored under sterile conditions at 2- 8℃ for up to one month without detectable loss of activity. ● **DO NOT FREEZE AFTER RECONSTITUTION!** Loss of activity has been observed upon thawing.

Human Interleukin 3

Interleukin 3 is a pleiotropic factor produced primarily by activated T cells that can stimulate the proliferation and differentiation of pluripotent hematopoietic stem cells as well as various lineage committed progenitors. In addition, IL-3 also affects the functional activity of mature mast cells, basophils, eosinophils and macrophages. Because of its multiple functions and targets, it was originally studied under different names, including mast cell growth factor, P-cell stimulating factor, burst promoting activity, multi-colony stimulating factor, thy1 inducing factor and WEHI 3 growth factor. In addition to activated T cells, other cell types such as human thymic epithelial cells, activated murine mast cells, murine keratinocytes and neurons/astrocytes can also produce IL-3. At the amino acid sequence level, mature human and murine IL-3 share only 29% sequence identity. Consistent with this lack of homology, IL-3 activity is highly species-specific and human IL-3 does not show activity on murine cells. IL-3 exerts its biological activities through binding to specific cell surface receptors. The high affinity receptor responsible for IL-3 signaling is composed of at least two subunits, an IL-3 specific α chain which binds IL-3 with low affinity and a common β chain that is shared by the IL-5 and GM-CSF high affinity receptors. Although the β chain itself does not bind IL-3, it confers high affinity IL-3 binding in the presence of the α chain. Receptors for IL-3 are present on bone marrow progenitors, macrophages, mast cells, eosinophils, megakaryocytes, basophils and various myeloid leukemia cells.

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