

Human Interleukin-3 (hIL-3)

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MW (kDa):	UniProt ID:	Entrez-Gene Id:
26	#P08700	3562

Background

IL-3 is produced by T cells, mast cells and eosinophils (1). Target cells include hematopoietic progenitors, neutrophils, macrophages, mast cells, eosinophils, lymphoid and erythroid cells (1). The IL-3 receptor is a heterodimer of the IL-3 specific α -chain and the common β -chain, β_c , which is also used by GM-CSF and IL-5. (1). Binding of IL-3 can also involve substitution of the β_c by a β_{IL-3} -chain that appears to be specific for IL-3 (1,2). Binding of IL-3 to its cognate receptor(s) induces activation of Jak2, phosphorylation of multiple Stats (1,3,5,6), and the PI3K/Akt pathway (1). IL-3 may play an important role in the development of airway inflammation associated with asthma (3,4,5).

Endotoxin

Less than 0.01 ng endotoxin/1 μ g hIL-3.

Purity

>98% as determined by SDS-PAGE of 6 μ g reduced (+) and non-reduced (-) recombinant hIL-3. All lots are greater than 98% pure.

Source / Purification

Recombinant human interleukin-3 (hIL-3) Ala20-Phe152 (Accession # NP_000579) was expressed in human 293 cells at Cell Signaling Technology.

Bioactivity

The bioactivity of recombinant hIL-3 was determined in a TF-1 cell proliferation assay. The ED₅₀ of each lot is between 50 -400 pg/ml.

Background References

1. Reddy, E.P. et al. (2000) *Oncogene* 19, 2532-47.
2. Hara, T. and Miyajima, A. (1992) *EMBO J* 11, 1875-84.
3. Asquith, K.L. et al. (2008) *J Immunol* 180, 1199-206.
4. Schroeder, J.T. et al. (2009) *J Immunol* 182, 2432-8.
5. Munitz, A. et al. (2006) *J Immunol* 177, 77-83.

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