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Human IL-5 Recombinant Protein

10 µg

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MW (kDa):	UniProt ID:	Entrez-Gene Id:
26	#P05113	3567

Background

IL-5 is a pleiotropic cytokine that is predominantly produced by TH2 T cells but can also be expressed by activated eosinophils, mast cells, NK cells, and iNKT cells (1-4). Both human and mouse IL-5 are glycosylated disulfide-linked homodimers (1). The IL-5 receptor is a heterodimer that consists of a high affinity IL-5 binding α chain and the common β chain, which is shared by GM-CSF and IL-3 receptors, for signal transduction (1,2). Soluble IL-5Rα binds with high affinity to IL-5, thereby inhibiting IL-5 activity (1). IL-5-mediated signaling can activate the Erk1/2, Jak2, and Stat5 signaling pathways (1,2). In mice, IL-5 is important for the differentiation of antibody-secreting cells from activated B cells (2). IL-5 induces eosinophil activation, proliferation, and differentiation in both mice and humans (2,3).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg hIL-5.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant human IL-5 was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant hIL-5 was determined in a TF-1 cell proliferation assay. The ED_{50} of each lot is less than or equal to 250 pg/ml.

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Background References

1. Takatsu, K. (2011) *Proc Jpn Acad Ser B Phys Biol Sci* 87, 463-85.
2. Wang, W. et al. (2011) *PLoS One* 6, e17766.
3. Kouro, T. and Takatsu, K. (2009) *Int Immunol* 21, 1303-9.
4. Chuang, Y.H. et al. (2011) *J Immunol* 186, 4687-92.

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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