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# Mouse IL-5 Recombinant Protein

25 µg

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**For Research Use Only. Not for Use in Diagnostic Procedures.****MW (kDa):**  
26**UniProt ID:**  
#P04401**Entrez-Gene Id:**  
16191

## 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  $\alpha$  chain and the common  $\beta$  chain, which is shared by GM-CSF and IL-3 receptors, for signal transduction (1,2). Soluble IL-5Ra 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 mL-5.

## Purity

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

## Source / Purification

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

## Bioactivity

The bioactivity of recombinant mIL-5 was determined in a TF-1 cell proliferation assay. The ED<sub>50</sub> of each lot is less than or equal to 2 ng/ml.

## 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.

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