

Store at
-20°C

Human IL-5 Recombinant Protein

Cell Signaling
TECHNOLOGY®

#44227

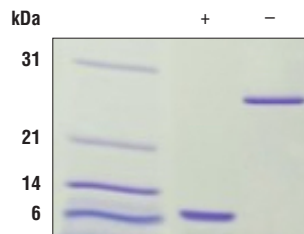
10 µg

New 11/20

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orders@cellsignal.comEntrez-Gene ID #3567
UniProt ID #P05113

For Research Use Only. Not For Use In Diagnostic Procedures.

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-5R α 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).

Molecular Weight: 26 kDa**Endotoxin:** Endotoxin levels are \leq 1 EU / 1 µg hIL-5.**Purity:** \geq 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 ED₅₀ of each lot is \leq 250 pg/ml.

The purity of Human IL-5 Recombinant Protein was determined by SDS-PAGE of 1 µg reduced (+) and non-reduced (-) recombinant hIL-5 and staining with Coomassie Blue. Human IL-5 is a homodimer with a predicted total molecular weight (MW) of 26.6 kDa with each subunit equaling 13.3 kDa.

Storage: Human IL-5 Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile water at a concentration of 0.1 mg/ml which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

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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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.