

Recombinant Human IL-5

Information

Gene ID	3567
Accession #	P05113
Alternate Names	Interleukin-5, B-cell differentiation factor I, Eosinophil differentiation factor, TRF.
Source	<i>Escherichia coli</i> .
M.Wt	Approximately 26.5 kDa, a disulfide-linked homodimeric protein containing two 116 amino acids.
AA Sequence	MIPTIPTSA LVKETLALLS THRTLLIANE TLRIPVPVHK NHQLCTEEIF QGIGTLESQT VQGGTVERLF KNLSLIKKYI DGQKKKCGEE RRRVNQFLDY LQEFLGVMNT EWIIES
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70°C as supplied. - 1 month, 2 to 8°C under sterile conditions after reconstitution. - 3 months, -20 to -70°C under sterile conditions after reconstitution.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB, pH 7.5, 3% Trehalose, 0.1% Tween-80.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using human TF-1 cells is less than 0.1 ng/ml, corresponding to a specific activity of >1.0 × 10 ⁷ IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10 µg	100 µg	500 µg
Recombinant Human IL-5	10 µg	100 µg	500 µg

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Quality Control

Purity	>98% by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuIL-5 as determined by LAL method.

Description

The IL-5 gene is located on chromosome 5 in humans, in close proximity to the genes encoding IL-3, IL-4, and granulocyte-macrophage colony-stimulating factor (GM-CSF), which are often co-expressed in TH2 cells. Through binding to the IL-5 receptor, IL-5 stimulates B cell growth and increases immunoglobulin secretion. It is also a key mediator in eosinophil activation. Interleukin-5 has long been associated with the cause of several allergic diseases including allergic rhinitis and asthma. IL-5 is a 115-amino acid (in human, 133 in the mouse) -long TH2 cytokine that is part of the hematopoietic family. Unlike other members of this cytokine family (namely IL-3 and GM-CSF), this glycoprotein in its active form is a homodimer.

Reference

1. MV Milburn, AM Hassell, MH Lambert, et al. 1993. Nature, 363: 172-6.
2. JS Lee, HD Campbell, CA Kozak, et al. 1989. Somat Cell Mol Genet, 15: 143-52.
3. BH van Leeuwen, ME Martinson, GC Webb, et al. 1989. Blood, 73: 1142-8.
4. S Dubucquoi, P Desreumaux, A Janin, et al. 1994. J Exp Med, 179: 703-8.

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