

Cytokines

Human Recombinant IL-5, ACF



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Interleukin 5, animal component-free

Catalog #	78195	10 µg
	78195.1	100 µg
	78195.2	1000 µg

Product Description

Interleukin 5 (IL-5) is a member of the short-chain 4- α -helical bundle subset of hematopoietic cytokines. It binds to a receptor consisting of IL-5Ra, which is specific for IL-5R and common beta chain, which is shared with the receptor for IL-3 and granulocyte-macrophage colony-stimulating factor (GM-CSF; Martinez-Moczygemba & Huston). Upon binding to its receptor, IL-5 activates the JAK/STAT and MAPK pathways. IL-5 is produced by Th2 cells, eosinophils, and activated mast cells. It functions in the recruitment, activation, proliferation, and survival of eosinophils, thus playing an important role in allergic inflammation, asthma, and parasite immunity. Stimulation of eosinophils with IL-5 leads to their activation, upregulation of CD11b expression, and inhibition of apoptosis (Martinez-Moczygemba & Huston). This product is animal component-free.

Product Information

Alternative Names:	B-cell differentiation factor 1, EDF, Eosinophil colony-stimulating factor, Eosinophil differentiation factor, Interleukin-5, T-cell replacing factor, TRF
Accession Number:	P05113
Amino Acid Sequence:	MIPTIPTSA LVKETLALLS THRTLLIANE TLRIPVPVHK NHQLCTEEIF QGIGTLESQT VQGGTVERLF KNLSLIKKYI DGQKKKCGEE RRRVNVQFLDY LQEFLGVMNT EWIIES
Predicted Molecular Mass:	13.3 kDa monomer; 26.6 kDa dimer
Species:	Human
Cross Reactivity:	Reported to be species-specific
Formulation:	Lyophilized from a sterile-filtered solution containing sodium glycinate, pH 8.5.
Source:	E. coli

Specifications

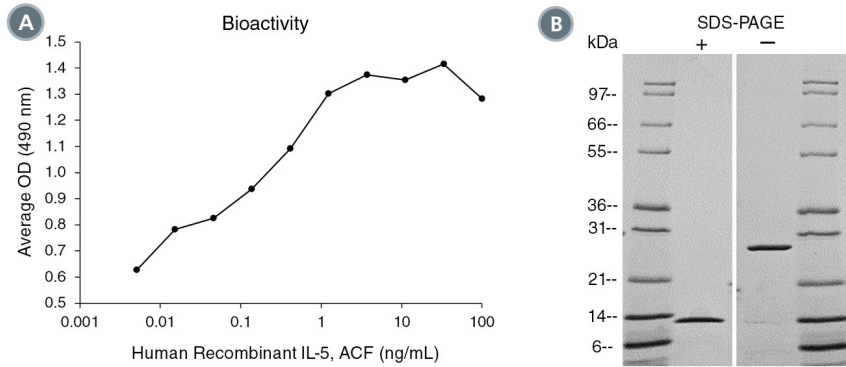
Activity:	The specific activity is $\geq 4.0 \times 10^6$ units/mg ($EC_{50} \leq 0.25$ ng/mL) as determined by a cell proliferation assay using TF-1 cells.
Purity:	$\geq 95\%$
Endotoxin Level:	Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 1 EU/ μ g protein.

Preparation and Storage

Storage:	Store at -20°C to -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex.

OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant IL-5, ACF was tested by its ability to promote the proliferation of TF-1 cells. Cell proliferation was measured using a fluorometric assay method. The EC₅₀ is defined as the effective concentration of the cytokine at which cell proliferation is at 50% of maximum. The EC₅₀ in the example above is 0.166 ng/mL.

(B) 1 µg of Human Recombinant IL-5, ACF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant IL-5, ACF has a predicted molecular mass of 26.6 kDa (13.3 kDa per monomer).

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

Martinez-Moczygemba M & Huston DP. (2003) Biology of common beta receptor-signaling cytokines: IL-3, IL-5, and GM-CSF. *J Allergy Clin Immunol* 112(4): 653–65.

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