

## Recombinant Rhesus Macaque Interleukin-5 (Rhesus Macaque IL-5)

### Product Information

Product Name	Cat#	Size
Recombinant Rhesus Macaque Interleukin-5 (Rhesus Macaque IL-5)	90135ES10	10 µg
	90135ES60	100 µg
	90135ES76	500 µg

### Product Description

Interleukin-5 (IL-5) is a secreted glycoprotein that belongs to the alpha -helical group of cytokines (1-3). Unlike other family members, it is present as a covalently linked antiparallel dimer. Mature rhesus IL-5 shares 98%, 95%, 70%, 71%, 66%, 70%, 61% and 64% aa sequence identity with mature human, mangabey, mouse, rat, feline, equine, canine and bovine IL-5, respectively. IL-5 is primarily produced by CD4+ Th2 cells, but also by activated eosinophils, mast cells, EBV-transformed B cells, Reed-Sternberg cells in Hodgkin's disease, and IL-2-stimulated invariant natural killer T cells (iNKT). IL-5 increases production and mobilization of eosinophils and CD34+ progenitors from the bone marrow and causes maturation of eosinophil precursors outside the bone marrow. The receptor for human IL-5, mainly expressed by eosinophils, but also found on basophils and mast cells, consists of a unique ligand-binding subunit (IL-5 R alpha ) and a shared signal-transducing subunit, beta c. IL-5 R alpha first binds IL-5 at low affinity, then associates with preformed beta c dimers, forming a high-affinity receptor. IL-5 also binds proteoglycans, potentially enhancing its activity. Soluble forms of IL-5 R alpha antagonize IL-5 and can be found in vivo. In humans, IL-5 primarily affects cells of the eosinophilic lineage, and promotes their differentiation, maturation, activation, migration and survival, while in mice IL-5 also enhances Ig class switching and release from B1 cells. IL-5 also promotes differentiation of basophils and primes them for histamine and leukotriene release.

### Product Properties

<b>Synonyms</b>	Eosinophil differentiation factor, TRF
<b>Accession</b>	P48093
<b>GeneID</b>	710622
<b>Source</b>	E.coli-derived Rhesus Macaque IL-5, Ile20-Ser134.
<b>Molecular Weight</b>	Approximately 26.1 kDa.
<b>AA Sequence</b>	IPTEIPASAL VKETLALLST HRTLLIANET LRIPVPVHKN HQLCTEEIFQ GIGTLESQTV QGGTVERLFK NLSLIKKYIG GQKKKCGEER RRVNQFLDYL QEFLGVMNTE WIIES
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	> 98% by SDS-PAGE and HPLC analyses.
<b>Biological Activity</b>	The ED <sub>50</sub> as determined by a cell proliferation assay using human TF-1 cells is less than 5 ng/mL, corresponding to a specific activity of > 2.0 × 10 <sup>5</sup> IU/mg. Fully biologically active when compared to standard.
<b>Endotoxin</b>	< 0.1 EU per 1µg of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4, with 5% Trehalose.

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**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  $\leq -20^{\circ}\text{C}$ . Further dilutions should be made in appropriate buffered solutions.

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**Shipping and Storage**

The products are shipped with ice pack and can be stored at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

**Cautions**

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!