

## Recombinant Rat Interleukin-21 (Rat IL-21)

### Product Information

Product Name	Cat#	Size
Recombinant Rat Interleukin-21 (Rat IL-21)	90178ES10	10 µg
	90178ES60	100 µg
	90178ES76	500 µg

### Product Description

Interleukin-21 (IL-21) is a type I cytokine that modulates functions of T, B, natural killer (NK), and myeloid cells. IL-21 is produced by activated T follicular helper cells (Tfh), Th17 cells, and NKT cells. Tfh-derived IL-21 plays an important role in the development of humoral immunity through its autocrine effects on the Tfh cell and paracrine effects on immunoglobulin affinity maturation, plasma cell differentiation, and B cell memory responses. The 133 amino acid (aa) mature human IL-21 protein shares 63% and 61% aa sequence identity with mouse and rat IL-21 protein, respectively. Alternative splicing generates an additional isoform with a substitution of the C-terminal 16 amino acids. IL-21 shows having much relation with clinical illnesses, including cancer immunotherapy, viral infections and allergies. And it suppresses cutaneous hypersensitivity reactions by limiting allergen-specific IgE production and mast cell degranulation.

### Product Properties

<b>Synonyms</b>	Interleukin-21, IL-21, Za11
<b>Accession</b>	A3QP9
<b>GeneID</b>	365769
<b>Source</b>	E.coli-derived rat IL-21 protein, His18-Ser146.
<b>Molecular Weight</b>	Approximately 15.2 kDa under reducing conditions.
<b>AA Sequence</b>	HKSSPQRPDH LLIRLRHLMD IVEQLKIYEN DLDPELLTAP QDVKGQCEHE AFACFQKAKL KPSNTGNNKT FINDLLAQLR RRLPAKRTGN KQRHMAKPCS CDLYEKKTPK EFLERLKWLL QKMIHQHLS
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	> 96% by SDS-PAGE and HPLC analyses.
<b>Biological Activity</b>	The ED <sub>50</sub> as determined by a cell proliferation assay using human N1186 cells is less than 50 ng/mL, corresponding to a specific activity of > 2.0 × 10 <sup>4</sup> IU/mg. Fully biologically active when compared to standard.
<b>Endotoxin</b>	< 1.0 EU per 1 µg of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Reconstitution</b>	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.

### Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°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!