

Datasheet for ABIN7566308

## IL-7 Protein (AA 26-154, Monomer) (Fc Tag)



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### Overview

Quantity:	50 µg
Target:	IL-7 (IL7)
Protein Characteristics:	AA 26-154, Monomer
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This IL-7 protein is labelled with Fc Tag.

### Product Details

Purpose:	IL-7 (mouse) (monomeric):Fc (LALA-PG)-KIH (human) (rec.)
Cross-Reactivity:	Mouse
Characteristics:	Mouse IL-7 (aa 26-154) is fused at the C-terminus to the Fc portion of human IgG1 (LALA-PG) (Knobs-into-Holes technology) (see reference: J.B. Ridgway, et al., Protein Eng. 9, 617 (1996)).
Purity:	>95 % (SDS-PAGE)
Endotoxin Level:	<0.01EU/µg protein (LAL test).
Grade:	Animal-Free
Biological Activity Comment:	Activates CD4+ T Cells proliferation. The Fc contains the mutations LALA-PG that abolish the interaction between the Fc and FcγRs and therefore Fc undesirable effects.

## Target Details

Target:	IL-7 (IL7)
Alternative Name:	IL-7 ( <a href="#">IL7 Products</a> )
Background:	<p>IL-7 (mouse) (monomeric):Fc (LALA-PG) Knobs-into-Holes (human) (rec.), Interleukin-7</p> <p>Interleukin-7 (IL-7) is a hematopoietic growth factor and a member of the IL-7/IL-9 family, which is produced by fetal liver cells, stromal cells in the bone marrow (BM), thymus and other epithelial cells, including keratinocytes and enterocytes. The receptor of IL-7, IL-7R, is a heterodimeric complex consisting of the alpha-chain (CD127) and the common cytokine receptor gamma-chain, shared with the receptors for IL-2, IL-4, IL-7, IL-9, IL-15 and IL-21, and expressed in a variety of cells. IL-7 has a critical developmental function at every stage of T cell development, for both alphabeta and gammadelta lineages, and for the development and survival of naive T cells as well as generation and maintenance of CD4 and CD8 memory. IL-7 is also essential for the development and maintenance of the new ILCs. IL-7 is important throughout hematopoiesis, facilitating key lineage fate decisions. IL-7 is thought to support aberrant immune activity in autoimmune diseases such as diabetes and multiple sclerosis and in chronic inflammatory diseases such as rheumatoid arthritis, ankylosing spondylitis and inflammatory bowel disease. IL-7 contributes to leukemia development in vivo and also stimulates multiple immune-mediated mechanisms that contribute to the eradication of tumors. The protein IL-7 (mouse) (monomeric):Fc (LALA-PG)-KIH (human) (rec.) is produced by using two different vectors, one encoding for the IL-7 (mouse):Fc (LALA-PG) Knobs sequence (synthesizing a protein of 55 kDa) and one encoding for the Fc (LALA-PG) Holes sequence (synthesizing a protein of 28 kDa). Both vectors transfected into HEK293 cells produce both Fc molecules (Knobs-into-Holes technology, J.B. Ridgway, et al., Protein Eng. 9, 617 (1996)) required for dimerization of the Fc moieties and for secretion of the final protein IL-7 (mouse) (monomeric):Fc-KIH (human) (rec.). The LALA-PG mutations inhibit binding to FcγR1 and C1q while FcγR2 binding and Fc stability remain unaffected. InVivoKines™ are a new generation of recombinant fusion proteins for immunotherapeutic, preclinical and translational in vivo research</p>
Molecular Weight:	~55kDa and 28kDa (SDS-PAGE)
UniProt:	<a href="#">P10168</a>
Pathways:	<a href="#">JAK-STAT Signaling</a>

## Application Details

Restrictions:	For Research Use only
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## Handling

Format:	Lyophilized
Reconstitution:	After reconstitution: 1 mg/mL
Concentration:	1 mg/mL
Buffer:	Contains PBS.
Handling Advice:	After reconstitution, prepare aliquots and store at -20 °C. Avoid freeze/thaw cycles. Centrifuge lyophilized vial before opening and reconstitution. PBS containing at least 0.1 % BSA should be used for further dilutions.
Storage:	4 °C, -20 °C
Storage Comment:	Short Term Storage: +4°C Long Term Storage: -20°C Use & Stability: Stable for at least 6 months after receipt when stored at -20°C. Working aliquots are stable for up to 3 months when stored at -20°C.