GMP Human IL-7

Cat. No. GMP-CKS-HE007

Description

Source	Recombinant GMP Human IL-7 is expressed from E.coli without tag.
	It contains Asp26-His177.
Accession	P13232
Molecular Weight	The protein has a predicted MW of 17.5 kDa same as Bis-Tris PAGE result.
Endotoxin	≤ 0.01 EU per μg by the LAL method.
Purity	≥ 95% as determined by SEC-HPLC.

Formulation and Storage

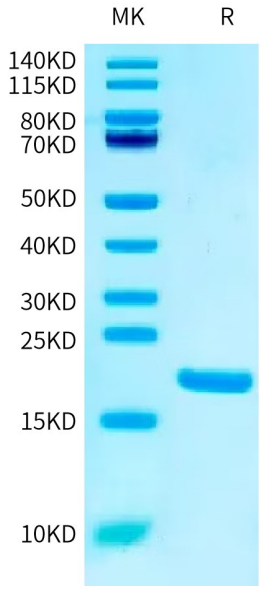
Formulation	Lyophilized from 0.22 μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
Reconstitution	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 μg/ml is recommended. Dissolve the lyophilized protein in distilled water.
Storage	The product is shipped with ice bag. Store it immediately at -20°C±5°C upon arrival. -20°C±5°C for 36 months in lyophilized state. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

Background

Interleukin (IL)-7 is a non-redundant cytokine in T-cell development and function. It is required in early T-cell development as well as for T-cell homeostasis and is secreted by stromal cells in the thymic and bone marrow (BM) environment. IL-7 binds to its receptor which is composed of the two chains IL-7Rα (CD127), shared with the thymic stromal lymphopoietin (TSLP), and the common γ chain (CD132) for IL-2, IL-15, IL-9 and IL-21. Whereas γc is expressed by most hematopoietic cells, IL-7Rα is nearly exclusively expressed on lymphoid cells. After binding to its receptor, IL-7 signals through two different pathways: Jak-Stat (Janus kinase-Signal transducer and activator of transcription) and PI3K/Akt responsible for differentiation and survival, respectively.

Assay Data

Bis-Tris PAGE



GMP Human IL-7 on Bis-Tris PAGE under reduced condition.

Cell Based Assay

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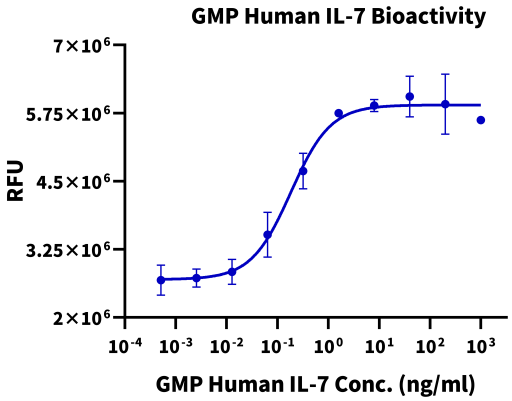
Assay Data



Measured in a cell proliferation assay using PHA-activated human peripheral blood mononuclear cell (PBMC). The specific activity of GMP Human IL-7 is > 1 × 10^8 IU/mg, which is calibrated against the human IL-7 WHO reference standard (NIBSC code: 90/530) (QC Test).