

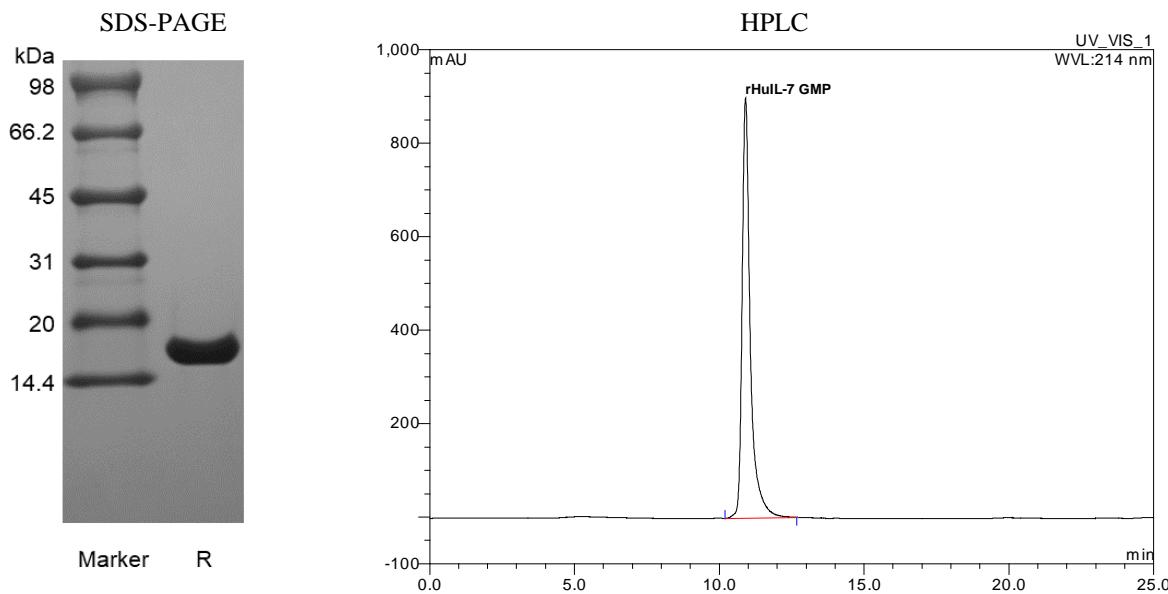
Recombinant Human Interleukin-7 GMP (rHuIL-7 GMP)

PrimeGene Technical DataSheet

Catalog Number:	GMP-101-07
Source:	<i>Escherichia coli</i>
Molecular Weight:	Approximately 17.4 kDa, a single non-glycosylated polypeptide chain containing 152 amino acids.
Size:	5 µg/100 µg/1 mg
Sequence:	DCDIEGKDGK QYESVLMVSI DQLLDSMKEI GSNCLNNNEFN FFKRHICDAN KEGMFLFRAA RKLRQFLKMN STGDFDLHLL KVSEGTTILL NCTGQVKGRK PAALGEAQPT KSLEENKSLK EQKKLNLCF LKRLLQEIKT CWNKILMGTK EH
Purity:	> 98% by SDS-PAGE and HPLC analyses.
Biological Activity:	Full biological activity when compared with standard protein by stimulating proliferation of PHA-activated human peripheral blood mononuclear cell (PBMC). The specific activity of recombinant human IL-7 is $> 1.0 \times 10^8$ Units/mg, which is calibrated against rHuIL-7 WHO reference reagent (NIBSC code: 90/530).
Physical Appearance:	Sterile filtered white lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin:	Less than 0.01 EU/µg of rHuIL-7 GMP as determined by LAL method.
Sterility:	Negative.
Mycoplasma:	Negative.
Host Cell Protein:	Less than 0.05% when tested by ELISA.
Host Cell DNA:	Less than 20 ng/mg when tested by qPCR.
In Vitro Virus Assay:	Negative.
Reconstitution:	Prior to opening, it is recommended to centrifuge the vial briefly to bring the contents down the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. If animal-origin-free condition is expected in your product, then sterile distilled water is recommended. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Shipping:	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage:	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none">● A minimum of 12 months from date of receipt, when stored at ≤ -20 °C as supplied.● 1 month, 2 to 8 °C under sterile conditions after reconstitution.● 3 months, -20 to -70 °C under sterile conditions after reconstitution.● Refer to lot-specific CoA for the Expiry Date.
Usage:	This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory, or further evaluation purposes. NOT FOR HUMAN USE.
Quality Statement:	The manufacturing and testing of these products comply with ICH Q7 guidelines.

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**Background:**

Interleukin-7 (IL-7) is encoded by the *IL7* gene and secreted by stromal cells in the red marrow and thymus. It binds to the IL-7 receptor, a heterodimer consisting of IL-7 receptor alpha and IL-2 receptor gamma chain. IL-7 stimulates the differentiation of hematopoietic stem cells into lymphoid progenitor cells and also stimulates proliferation of B cells, T cells and NK cells. Murine IL-7 has approximately 65% amino acid sequence identity with human IL-7 and both proteins exhibit cross-species activity. IL-7 as an immunotherapy target has been examined in many human clinical trials for various malignancies and during HIV infection.

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