

## PrimeGene Technical DataSheet

<b>Catalog Number:</b>	101-07
<b>Source:</b>	<i>Escherichia coli</i>
<b>Molecular Weight:</b>	Approximately 17.4 kDa, a single non-glycosylated polypeptide chain containing 152 amino acids.
<b>Size:</b>	10 µg/100 µg/500 µg/1 mg
<b>Sequence:</b>	DCDIEGKDGK QYESVLMVSI DQLLDSTMKEI GSNCLNNEFN FFKRHICDAN KEGMFLFRAA RKLRQFLKMN STGDFDLHLL KVSEGTTILL NCTGQVKGRK PAALGEAQPT KSLEENKSLK EQKKLNDLCF LKRLLEIKT CWNKILMGTK EH
<b>Purity:</b>	> 97% by SDS-PAGE and HPLC analyses.
<b>Biological Activity:</b>	Fully biologically active when compared to standard. rHuIL-7 stimulates 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 human IL-7 WHO Standard (NIBSC code: 90/530).
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM PB, 150 mM NaCl, pH 7.4.
<b>Endotoxin:</b>	Less than 1 EU/µg of rHuIL-7 as determined by LAL method.
<b>Reconstitution:</b>	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 $\leq -20$ °C. Further dilutions should be made in appropriate buffered solutions.
<b>Shipping:</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● A minimum of 12 months from date of receipt, when stored at <math>\leq -20</math> °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>
<b>Usage:</b>	This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>

### Human Interleukin-7

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 agent has been examined in many human clinical trials for various malignancies and during HIV infection.