



Recombinant Protein Technical Manual

**Recombinant Human Interleukin-7/IL-7 Protein
(Active)**
RPES1338

Product Data:

Product SKU: RPES1338

Size: 10µg

Species: Human

Expression host: E. coli

Uniprot: P13232

Protein Information:

Molecular Mass: 17.5 kDa

AP Molecular Mass: 18 kDa

Tag:

Bio-activity: Measured in a cell proliferation assay using PHA-activated human peripheral blood lymphocytes (PBL). The ED50 for this effect is 0.02-0.08ng/ml.

Purity: > 95% as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from a 0.2 µm filtered solution of 20mMPB, 300mMNaCl, pH8.0.

Reconstitution: Please refer to the printed manual for detailed information.

Application: Cell Culture

Synonyms: Interleukin-7; IL-7; IL7

Immunogen Information:

Sequence: Asp26-His177

Background:

Human Interleukin 7 (IL-7) is a potent lymphoid cell growth factor stimulating the proliferation of lymphoid progenitors. IL7 can associate with the hepatocyte growth factor (HGF) to form a hybrid cytokine that functions as a pre-pro-B cell growth-stimulating factor. Human IL7 cDNA encodes a 177 amino acid precursor protein containing a 25 amino acid signal peptide and a 152 amino acid mature protein. Human and mouse IL7 share 65% sequence identity in the mature region and both exhibit cross-species activity. IL-7 signals via IL-7 receptor (IL7R) activating multiple pathways including JaK/STAT and PI3K/AKT, which regulate lymphocyte survival, glucose uptake, proliferation, and differentiation. IL-7 is also associated with cytoplasmic IL2-R gamma for signal transduction.