



# Recombinant Protein Technical Manual

## Recombinant Human Interleukin7A/IL7A Protein (Active) RPES2000

### Product Data:

**Product SKU:** RPES2000

**Size:** 10µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** Q16552

### Protein Information:

**Molecular Mass:** 15.3 kDa

**AP Molecular Mass:** 16 kDa

#### Tag:

**Bio-activity:** Measured by its ability to induce IL-6 secretion by NIH-3T3 mouse embryonic fibroblast cells. The ED50 for this effect is 1-7 ng/ml.

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

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

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°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 20mM PB, pH 7.4.

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

#### Application:

**Synonyms:** Interleukin7A; IL7; IL7A; Cytotoxic T-Lymphocyte-Associated Antigen 8; CTLA-8; IL17A; CTLA8; IL17

## Immunogen Information:

**Sequence:** Ile20-Ala155

## Background:

Interleukin7 is a potent pro-inflammatory cytokine produced by activated memory T cells. There are at least six members of the IL7 family in humans and in mice. As IL7 shares properties with IL and TNF-alpha, it may induce joint inflammation and bone and cartilage destruction. This cytokine is found in synovial fluids of patients with rheumatoid arthritis, and produced by rheumatoid arthritis synovium. It increases IL-6 production, induces collagen degradation and decreases collagen synthesis by synovium and cartilage and proteoglycan synthesis in cartilage. IL7 is also able to increase bone destruction and reduce its formation. Blocking of interleukin7 with specific inhibitors provides a protective inhibition of cartilage and bone degradation.