## Recombinant Human IL7RA/CD127 Protein (His Tag)

Catalog Number: PKSH031327



Note: Centrifuge before opening to ensure complete recovery of vial contents.

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LIACOPT	ntion
Descri	

Synonyms CD127;CDW127;IL-7R;IL-7R-alpha;IL7RA;ILRA;Interleukin-7 receptor subunit

alpha;IL7R

Species Human

Expression Host
Sequence
Met 1-Gly 236
Accession
NP\_002176.2
Calculated Molecular Weight
Observed molecular weight
Tag
HEK293 Cells
Met 1-Gly 236
NP\_002176.2
C6.3 kDa
45-50 kDa
C-His

**Bioactivity** Measured by its ability to bind biotinylated mouse TSLP-his in functional ELISA.

## **Properties**

**Purity** > 92 % as determined by reducing SDS-PAGE.

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

**Storage** Generally, 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 sterile PBS, pH 7.4

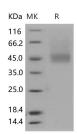
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as

protectants before lyophilization.

Please refer to the specific buffer information in the printed manual.

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

#### Data



> 92 % as determined by reducing SDS-PAGE.

## **Background**

Interleukin 7 Receptor alpha (IL-7RA), also known as CD127, is a 75 kDa hematopoietin receptor superfamily member that plays an important role in lymphocyte differentiation, proliferation, and survival. IL-7RA signaling is essential for T-cell development and regulation of naive and memory T-cell homeostasis. Studies from both pathogenic and controlled HIV infection indicate that the containment of immune activation and preservation of CD127 expression are critical to the stability of CD4(+) T cells in infection. A better understanding of the factors regulating CD127 expression in HIV disease, particularly on T(CM) cells, might unveil new approaches exploiting the IL-7/IL-7R receptor pathway to restore

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T cell homeostasis and promote immune reconstitution in HIV infection. Factors relevant to HIV infection that could potentially decrease CD127 expression on human CD8(+) T cells. CD127 down-regulation may be an important contributor to HIV-associated T-cell dysfunction. In addition to IL-7, IL-7RA also associates with TSLPR to form the functional receptor for thymic stromal lymphopoietin (TSLP) which indirectly regulates T cell development by modulating dendritic cell activation. Mutations in the human IL-7RA gene cause a type of severe combined immunodeficiency in which the major deficiencies are in T cell development, whereas B and NK cells are relatively normal in number. Soluble CD127 (sCD127) appears to play an important role in the immunopathogenesis of several chronic infections, multiple sclerosis, and various cancers.

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