



Recombinant Protein Technical Manual

Recombinant Rat IL7RA/CD127 Protein (Fc Tag)(Active)
RPES1052

Product Data:

Product SKU: RPES1052

Size: 20µg

Species: Rat

Expression host: HEK293 Cells

Uniprot: D4A3X8

Protein Information:

Molecular Mass: 51.4 kDa

AP Molecular Mass: 65 kDa

Tag: C-Fc

Bio-activity: Measured by its ability to bind rat IL7 in a functional ELISA.

Purity: > 95 % as determined by SDS-PAGE

Endotoxin: < 1.0 EU per µg of the protein 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 sterile PBS, pH 7.4

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

Application: Functional ELISA

Synonyms: IL7R

Immunogen Information:

Sequence: Met1-Asp239

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-7 receptor alpha (CD127) signaling is essential for T-cell development and regulation of naive and memory T-cell homeostasis. IL-7RA is critically required for the proper development and function of lymphoid cells. Therefore, the IL-7RA is critically required for the proper development and function of lymphoid cells. 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 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. Variation in the IL7RA gene was recently found associated with multiple sclerosis (MS). The polymorphisms in the IL7RA gene is involved in MS pathogenesis and suggest that IL7RA variation may primarily affect chronic disease courses. Soluble CD127 (sCD127) appears to play an important role in the immunopathogenesis of several chronic infections, multiple sclerosis, and various cancers.