



Recombinant Protein Technical Manual

Recombinant Human IL2Ra/CD25 Protein (His Tag)(Active)
RPES1147

Product Data:

Product SKU: RPES1147

Size: 20µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_000408.1

Protein Information:

Molecular Mass: 23.3 kDa

AP Molecular Mass: 44 kDa

Tag: C-His

Bio-activity: 1. Using the Octet RED System, the affinity constant (Kd) of Human IL2RA-his bound to Human IL2 was 35nM. 2. Measured by its ability to inhibit IL2-dependent proliferation of MO7e human megakaryocytic leukemic cells in the presence of 30 ng/mL of recombinant human IL-2. The ED50 for this effect is 0.15-0.75µg/mL.

Purity: > 97 % 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 sterile PBS, pH 7.4

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

Application:

Synonyms: Interleukin-2 receptor subunit alpha;CD25;p55;TAC antigen;IL2-RA;IL-2R subunit alpha;IL-2-RA;IL-2 receptor subunit alpha; IL-2Rα;IDDM10;IL2R;p55;TCGFR

Immunogen Information:

Sequence: Met 1-Cys 213

Background:

CD25 (alpha-chain of IL-2 receptor, or IL2RA), is a type I transmembrane glycoprotein with a signal peptide, an extracellular region, a transmembrane region, and a cytoplasmic domain. IL2RA is expressed on activated T cells and regulatory T cells, and is capable of binding IL2 with low affinity by itself. However, a ligand-induced high affinity heterotrimeric receptor complex is produced when IL2RA is associated non-covalently with the IL2 receptor beta and gamma chain, and subsequently initiates the intracellular signal pathways such as MAPK or JAK/STAT. On dendritic cells (DC), CD25 has been previously regarded as an activation marker, while both murine and human DC can express CD25, they do not express the beta-chain of the IL-2 receptor, which is indispensable for the execution of IL-2 signaling. The IL2RA (CD25) gene is a substantial component of the high-affinity receptor molecule highly expressed by activated T lymphocytes. Recently, a strong evidence was obtained for the involvement of IL-2RA in conferring susceptibility to type 1 diabetes (T1D). Cancer growth and development is associated with the stimulation of the innate immune system, including enhanced interleukin 2 receptor (IL-2R) expression in immune cells and its shedding into the circulation in a soluble form of sIL-2Ralpha. In most haematological malignancies, including different types of leukaemias and lymphomas, sIL-2Ralpha has been found to be released directly from the surface of neoplastic cells thus reflecting the tumour bulk, turnover and activity. Several studies have proved that not only lymphoid cancer cells, but also some non-lymphoid cancer cells, express IL-2R on their surface. They include malignant melanoma and carcinomas of the kidney, head and neck, oesophagus and lung. Thus, sIL-2Ralpha is elevated in most proliferative disturbances of the hematopoietic system and in many solid tumors.