

Recombinant Human IL2Ra/CD25 Protein (His Tag)

Catalog No. PKSH031814

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

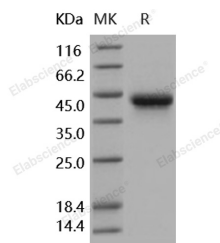
Description

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
Species	Human
Expression Host	HEK293 Cells
Sequence	Met 1-Cys 213
Accession	NP_000408.1
Calculated Molecular Weight	23.3 kDa
Observed molecular weight	44 kDa
Tag	C-His
Bioactivity	<ol style="list-style-type: none"> 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.

Properties

Purity	> 97 % 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	<p>Lyophilized from sterile PBS, pH 7.4</p> <p>Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.</p> <p>Please refer to the specific buffer information in the printed manual.</p>
Reconstitution	Please refer to the printed manual for detailed information.

Data



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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.

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