

Recombinant Human IL2Ra/CD25 Protein (His Tag)

Catalog Number: PKSH031814

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

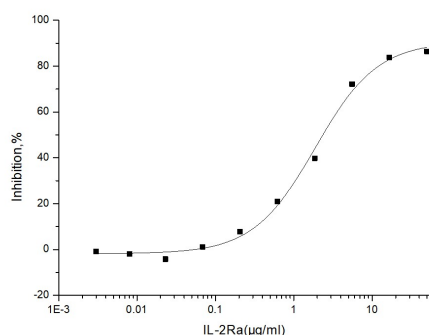
Description

Species	Human
Source	HEK293 Cells-derived Human IL2Ra/CD25 protein Met 1-Cys 213, with an C-terminal His
Calculated MW	23.3 kDa
Observed MW	44 kDa
Accession	NP_000408.1
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 M07e human megakaryocytic leukemic cells in the presence of 30 ng/mL of recombinant human IL-2. The ED ₅₀ 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	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 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



Measured by its ability to inhibit IL2-induced proliferation of M07e cells. The ED₅₀ for this effect is 0.2-1.2 µg/mL in the presence of 30ng/mL of recombinant human IL2.

Background

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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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