

Recombinant Rat IL2RA Protein (Met1-Gln235), His-tagged

Cat. No. IL2RA-942R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat IL2RA Protein (NP_037295.1) (Met1-Gln235) was produced by Baculovirus-Insect Cells expression system. This protein was expressed with a polyhistidine tag at the C-terminus.
Species	Rat
Source	Insect Cells
ProteinLength	Met1-Gln235
Description	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

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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.

Predicted N Terminal	Glu 22
Form	Lyophilized from sterile 20 mM Tris, 500 mM NaCl, pH 7.5, 10 % glycerol. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Molecular Mass	The recombinant rat IL2ra consists of 225 amino acids and predicts a molecular mass of 25.9 kDa.
Endotoxin	< 1.0 EU per µg protein as determined by the LAL method.
Purity	> 95 % as determined by SDS-PAGE.
Stability	Samples are stable for up to twelve months from date of receipt at -70 centigrade.
Storage	Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

Reconstitution

It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 mg/ml. Centrifuge the vial at 4°C before opening to recover the entire contents.

Shipping

In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature.

Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name

IL2ra interleukin 2 receptor, alpha [*Rattus norvegicus*]

Official Symbol

IL2RA

Synonyms

IL2RA; IL2-RA; IL-2-RA; IL-2R subunit alpha; IL2RAC;

Gene ID

25704

mRNA Refseq

NM_013163

Protein Refseq

NP_037295

UniProt ID

P26897

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