

CD122/IL2RB Protein, Human, Recombinant (hFc)

General Information

Synonyms:	IL-15RB;interleukin 2 receptor, beta;interleukin 2 receptor, β ;IL15RB;CD122;P70-75
Protein Construction:	Ala27-Asp239
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P14784
Molecular Weight:	51.35 kDa (predicted); 60-70 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Immobilized Human IL-2 R beta, hFc Tag at 1 μ g/ml (100 μ l/well) on the plate. Dose response curve for Biotinylated Human IL-15Ra&IL-15, His Tag with the EC50 of 18.5ng/ml determined by ELISA (QC Test). Human IL-2 R beta, hFc Tag captured on CM5 Chip via Protein A can bind Human IL-2, No Tag with an affinity constant of 0.216 μ M as determined in SPR assay (Biacore T200). Human IL-2 R beta, hFc Tag captured on CM5 Chip via Protein A can bind Human IL-15, No Tag with an affinity constant of 2.88 nM as determined in SPR assay (Biacore T200).
Purity:	\geq 90 % as determined by SDS-PAGE. \geq 90 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22 μ m filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:	Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Interleukin-2 receptor (IL-2R) also known as High-affinity IL-2 receptor subunit beta, IL-2 receptor subunit beta, and IL-2RB, is involved in T cell-mediated immune responses. CD122/IL-2RB is present in 3 forms concerning the ability to bind interleukin 2. The low-affinity form is a monomer of the alpha subunit and is not involved in signal transduction. The intermediate affinity form consists of an alpha/beta subunit heterodimer, while the high-affinity form consists of an alpha/beta/gamma subunit heterotrimer. Both the intermediate and high-affinity forms of CD122/IL-2RB are involved in receptor-mediated endocytosis and transduction of mitogenic signals from interleukin 2. CD122/IL-2RB expression was restricted to the earliest B220+ cells (CD43+CD24-; prepro B cells; fraction A) that proliferate vigorously to IL-2 in the absence of any stromal cells, but not to IL-15. The high-affinity form of this receptor is expressed on activated T lymphocytes, activated B lymphocytes, and activated macrophages. CD122/IL-2RB plays a role in regulating normal lymphocyte development.

Reference

Foss F. (2006) Clinical experience with denileukin diftitox (ONTAK). *Semin Oncol.* 33(1 Suppl 3): 11-6.

Sprent J, et al. (2001) T cell death and memory. *Science.* 293(5528): 245-8.

Teshigawara K, et al. (1987) Interleukin 2 high-affinity receptor expression requires two distinct binding proteins. *J Exp Med.* 165 (1): 223-38.

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