Data Sheet (Cat.No.TMPY-05680)

TargetMol

CD122/IL2RB Protein, Human, Recombinant (mFc)

General Information

Synonyms:	CD122;IL15RB;IL-15RB;interleukin 2 receptor, beta;interleukin 2 receptor, β;P70-75
Protein Construction:	A DNA sequence encoding the human IL2RB (NP_000869.1) (Met1-Asp239) was expressed with the Fc region of mouse IgG1 at the C-terminus. Predicted N terminal: Ala 27
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P14784
Molecular Weight:	51 kDa (predicted)

QC Testing

Biological Activity:	1. Measured by its ability to bind biotinylated IL2 basic in a functional ELISA. 2. Measured by its ability to inhibit IL-15-dependent proliferation of MO7e human megakaryocytic leukemic cells in the presence of 4 ng/mL of recombinant human IL-15. The ED50 for this effect is typically 2-12 μg/mL.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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.

Actual storage temperature shall be subject to the COA.

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.