Data Sheet (Cat.No.TMPY-05739)

TargetMol

IL-4R Protein, Cynomolgus, Recombinant (hFc)

General Information

Synonyms:	interleukin 4 receptor
Protein Construction:	A DNA sequence encoding the cynomolgus IL4R (EHH60265.1) (Met1-Arg232) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Met 26
Species:	Cynomolgus
Expression Host:	HEK293 Cells
Accession:	G7Q0S7
Molecular Weight:	50.48 kDa (predicted)

QC Testing

Biological Activity:	1. Measured by its ability to inhibit IL-4 dependent proliferation of TF-1 human erthroleukemic cells. The ED50 for this effect is 4-16 ng/ml in the presence of 0.2 ng/mL IL-4. 2. Immobilized Recombinant Human IL4 / Interleukin-4 Protein at 2μg/mL (100μL/well) can bind Recombinant Cynomolgus IL4R Protein (ECD, Fc Tag), the EC50 is 18-56 ng/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:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

The cluster of differentiation (CD) system is commonly used as cell markers in Immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the

CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alters the behavior of the cell. Some CD proteins do not take part in the cell signal process but have other functions such as cell adhesion. CD124, also known as the interleukin 4 receptor (IL4R), is a type I transmembrane protein that can regulate IgE antibody production in B cells through binding to interleukin 4 and interleukin 13 and promote differentiation of Th2 cells through binding to interleukin 4. The membrane-bound form of CD124 can be hydrolyzed to a soluble form which can inhibit IL4-mediated cell proliferation and IL5 upregulation by T-cells.

Reference

Zola H,et al.(2007) CD molecules 2006-human cell differentiation molecules. J Immunol Methods. 318 (1-2): 1-5.
Ho IC,et al.(2009) GATA3 and the T-cell lineage: essential functions before and after T-helper-2-cell differentiation. Nat Rev Immunol. 9 (2): 125-35.
Matesanz-Isabel J,et al.(2011) New B-cell CD molecules. Immunology Letters.134 (2): 104-12.

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