Data Sheet (Cat.No.TMPY-02558)

TargetMol

IL-4 Protein, Mouse, Recombinant

General Information

Synonyms:	BSF-1;Il-4;interleukin 4
Protein Construction:	A DNA sequence encoding the mouse IL4 (NP_067258.1) (His23-Ser140) was expressed with a N-terminal Met. Predicted N terminal: Met
Species:	Mouse
Expression Host:	E. coli
Accession:	P07750
Molecular Weight:	13.4 kDa (predicted); 14 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured in a cell proliferation assay using HT-2 mouse T cells. The ED50 for this effect is typically 0.4-4 ng/mL.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
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.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

Interleukin-4, also known as IL4, is a secreted protein that belongs to the IL-4 / IL-13 family. Interleukin-4 / IL4 has many biological roles, including the stimulation of activated B-cell and T-cell proliferation. It enhances both secretion and cell surface expression of IgE and IgG1. Interleukin-4 / IL4 also regulates the expression of the low-affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes. Interleukin-4 is essential for the switching of B cells to IgE antibody production and the maturation of T helper (Th) cells toward the Th2 phenotype. It

participates in at least several B-cell activation processes as well as other cell types. However, studies show that double mutant (Q116D, Y119D) of the murine IL4 protein (QY), both glutamine 116 and tyrosine 119, which binds to the IL4 receptor alpha, completely inhibits in a dose-dependent manner the IL4-induced proliferation of lipopolysaccharide-stimulated murine splenic B-cells, of the murine T cell line CTLL-2, and the murine pre-B-cell line BA/F3. QY also inhibited the IL4-stimulated up-regulation of CD23 expression by lipopolysaccharide-stimulated murine splenic B-cells and abolished tyrosine phosphorylation of the transcription factor Stat6 and the tyrosine kinase Jak3 in IL4-stimulated BA/F3 cells.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Grunewald SM. et al., 1998, J Immunol. 160 (8): 4004-9.
Susanne M. et al, 1997, THE JOURNAL OF BIOLOGICAL CHEMISTRY. 272 (3): 1480-3.
Nishikubo K. et al., 2003, Gene Ther. 10 (26): 2119-25.