Data Sheet (Cat.No.TMPY-03383)

TargetMol

IL-7 Protein, Human, Recombinant

General Information

Synonyms:	IL-7;interleukin 7;Interleukin-7
Protein Construction:	A DNA sequence encoding the mature form of human IL7 (NP_000871.1)(Asp26-His177) was expressed with a N-terminal Met. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	P13232-1
Molecular Weight:	17.5 kDa (predicted); 16.44 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured in a cell proliferation assay using anti-CD3 antibody activated human peripheral blood mononuclear cell (PBMC). The ED50 for this effect is typically 0.5-8 ng/ml.
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
Endotoxin:	< 0.01 EU/μg of the protein.
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

IL7, also known as interleukin 7, is a hematopoietic growth factor that belongs to the IL-7/IL-9 family. It is secreted by stromal cells in the bone marrow and thymus. IL7 stimulates the proliferation of lymphoid progenitors. It is important for proliferation during certain stages of B-cell maturation. IL7 and the hepatocyte growth factor (HGF) form a heterodimer that functions as a pre-pro-B cell growth-stimulating factor. It is found to be a cofactor for V(D)J rearrangement of the T cell receptor beta (TCRß) during early T cell development. IL7 can be produced locally

by intestinal epithelial and epithelial goblet cells and may serve as a regulatory factor for intestinal mucosal lymphocytes.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Watanabe M,et al.(1995) Interleukin 7 is produced by human intestinal epithelial cells and regulates the proliferation of intestinal mucosal lymphocytes.J Clin Invest. 95(6):2945-53.
Sawa Y,et al.(2009) Hepatic interleukin-7 expression regulates T cell responses. Immunity. 30 (3):447-57.
Flad HD,et al.(1996) Human follicular dendritic cells and vascular cells produce interleukin-7: a potential role for interleukin-7 in the germinal center reaction. Eur J Immunol. 26(10): 2541-4.