Data Sheet (Cat.No.TMPY-03488)

TargetMol

IL-11 Protein, Human, Recombinant

General Information

Synonyms: interleukin 11;IL-11;AGIF

Protein Construction: A DNA sequence encoding the mature form of human IL11 (AAH12506.1) (Pro22-Leu199) was expressed. Predicted N terminal: Pro 22

Species: Human

Expression Host: E. coli

Accession: AAH12506.1

Molecular Weight: 19.1 kDa (predicted); 23 kDa (reducing conditions)

QC Testing

Biological Activity: 1.Measured in a cell proliferation assay using T1165 mouse plasmacytoma cells. The ED50 for this effect is typically 1-8 ng/mL.
2.Loaded Human IL11RA Protein, His Tag on His1K Biosensor, can bind Human IL11 protein with an affinity constant of 0.353nM as determined in BLI assay (Routinely tested).

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:

Reconstituted with sterile deionized water to 0.1 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

IL11 is a multifunctional cytokine first isolated in 199 from bone marrow-derived stromal cells. It is a key regulator of multiple events in hematopoiesis, most notably the stimulation of megakaryocyte maturation. IL11 is also known under the names adipogenesis inhibitory factor (AGIF) and oprelvekin. IL11 can improve platelet recovery

after chemotherapy-induced thrombocytopenia, induce acute-phase proteins, modulate antigen-antibody responses, participate in the regulation of bone cell proliferation and differentiation, and could be used as a therapeutic for osteoporosis. IL11 stimulates the growth of certain lymphocytes and, in the murine model, stimulates an increase in the cortical thickness and strength of long bones. As a signaling molecule, IL11 has a variety of functions associated with its receptor interleukin 11 receptor alpha; such functions include placentation and to some extent of decidualization.

Reference

McKinley D. et al., 1992, Genomics. 13 (3): 814-9.
Paul SR. et al., 1990, Proc Natl Acad Sci. 87 (19): 7512-6.
Kawashima I. et al., 1991, FEBS Lett. 283 (2): 199-202.