Recombinant Human TSLP

Catalog # FL030

Product Specifications

Appearance	Sterile filtered White lyophilized (freeze-dried) powder.
Purity	> 98% by SDS-PAGE or HPLC.
Endotoxin	< 0.1 EU/μg of rHuTSLP protein as determined by LAL method.
Expression System	Expressed in E. coli.
Species	Human
Tag	Tag free.
Activity	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using human IL-7Rα and human TSLP R co-transfected murine BaF3 pro-B cells is less than 0.3 ng/ml, corresponding to a specific activity of ≥ 3.3 ×10^6 IU/mg.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PB, with 150 mM NaCl, pH 7.4.
Reconstitution	Before use this product, please read the direction below carefully. This vial must be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.
Accession #	Q969D9 Tyr29-Gln159 with an N-terminal Met
Amino acid sequence	MYDFTNCDFEKIKAAYLSTISKDLITYMSGTKSTEFNNTVSCSNRPHCLTEIQSLTFNPTAGCASLAKEMFAMKTKAALAIW CPGYSETQINATQAMKKRRKRKVTTNKCLEQVSQLQGLWRRFNRPLLKQQ
Molecular weight	Approximately 15.1 kDa, a single non-glycosylated polypeptide chain containing 132 amino acids.
Synonyms	thymic stromal lymphopoietin, TSLP
Stability & Storage	For long term storage, the product should be stored ≤ -20°C. Please avoid repeated freeze-thaw cycles after reconstitution. 36 months from date of receipt, -20 to -70°C as supplied. 1 month, 2 to 8°C under sterile conditions after reconstitution. 3 months, -20 to -70°C under sterile conditions after reconstitution.
Precautions	Recombinant Human TSLP is for research use only and not for use in diagnostic or therapeutic procedures.

Background

Thymic stromal lymphopoietin (TSLP) is a hemopoietic protein belonging to the cytokine family and is known to play an import ant role in the maturation of T cell populations through activation of antigen presenting cells. It is mainly expressed in a number of tissues including heart, liver and prostate. TSLP signals through a heterodimeric receptor complex composed of the thymic s tromal lymphopoietin receptor and the IL-7R alpha chain. After binding STAT5 phosphorylation is induced resulting in the expre ssion of downstream transcription factors. Like IL-7, TSLP induces phosphorylation of STAT3 and STAT5, but uses kinases o ther than the JAKs for activation. TSLP has the functions of enhancing the maturation of CD11c+ dendritic cells and inducing a llergic inflammation by directly activating mast cells. Its expression is linked to many disease states including asthma, inflammat ory arthritis, atopic dermatitis, and eczema and other allergic states. But the factors inducing the activation of TSLP release are not clearly defined. TSLP-activated DCs have been shown to prime na ve T cells to produce the proallergic cytokines (IL-4, IL-5, IL-13, TNF-α) while down-regulating IL-10 and IFN-γ, suggesting a role in initiating allergic inflammation. Human TSLP sha res approximately 43% a.a. sequence identity with mouse TSLP. Recombinant Human TSLP is a 15.1kDa protein consisting of 132 amino acid residues.

Validation Images