

Recombinant Human Thymic Stromal Lymphopoietin

#R00074

Size: 10 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 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.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Thymic stromal lymphopoietin (TSLP) is a hemopoietic protein belonging to the cytokine family and is known to play an important 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 stromal lymphopoietin receptor and the IL-7R alpha chain. After binding STAT5 phosphorylation is induced resulting in the expression of downstream transcription factors. Like IL-7, TSLP induces phosphorylation of STAT3 and STAT5, but uses kinases other than the JAKs for activation. TSLP has the functions of enhancing the maturation of CD11c+ dendritic cells and inducing allergic inflammation by directly activating mast cells. Its expression is linked to many disease states including asthma, inflammatory arthritis, atopic dermatitis, and eczema and other

allergic states. But the factors inducing the activation of TSLP release are not clearly defined. Human TSLP shares approximately 43 % a.a. sequence identity with mouse TSLP.

AA Sequence

MYDFTNCDFEKIKAAYLSTISKDLITYMSGTKSTEFNN
TVSCSNRPHCLTEIQSLTFNPTAGCASLAKEMFAMKT
KAALAIWCPGYSETQINATQAMKKRRKRKVTTNKCLE
QVSQLQGLWRRFNRPLLKQQ

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 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.

Product Specification

Synonyms	
Accession	Q969D9
GeneID	85480
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 15.1 kDa, a single non-glycosylated polypeptide chain containing 132 amino acids.
Purity	> 98 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ 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 $> 3.3 \times 10^6$ IU/mg.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μ m filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl.
Endotoxin	Less than 1 EU/ μ g of rHuTSLP as determined by LAL method.