

TSLP Protein, Human, Recombinant

General Information

Synonyms:	TSLP;Thymic stromal lymphopoietin
Protein Construction:	Tyr29-Gln159
Species:	Human
Expression Host:	E. coli
Accession:	Q969D9
Molecular Weight:	14 KDa (reducing condition)
AA Sequence:	Tyr29-Gln159

QC Testing

Biological Activity:	1. Loaded Human TSLP R-Fc on Protein A Biosensor, can bind Human TSLP with an affinity constant of 9.04 nM as determined in BLI assay. (Regularly tested) 2. Immobilized Human TSLP at 10µg/ml (100 µl/well) can bind Human TSLP R-Fc. The ED50 of Human TSLP R-Fc is 0.16 ug/ml. (Regularly tested)
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/µg (1 EU/µg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

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

Thymic stromal lymphopoietin (TSLP) is a novel member of the hemopoietic cytokine family that promotes the development of B cells and shares overlapping activity with IL-7. The human TSLP protein comprises a 28 amino acids (aa) signal sequence and 131 aa mature region. Human TSLP has two isoforms lftTSLP and sftTSLP produced

by alternative splicing . lftSLP is expressed in a number of tissues including heart, liver and prostate, and sfTSLP (63aa) is predominantly expressed in keratinocytes of oral mucosa, skin and in salivary glands. In aa sequence level, Human TSLP displays about 43% identity with mouse TSLP. TSLP is a cytokine that functions mainly on myeloid cells; it induces the release of T cell-attracting chemokines from monocytes and enhances the maturation of CD11c(+) dendritic cells. TSLP has proliferative effects on the myeloid cell line and may initiate asthma or atopic dermatitis responses by directly activating mast cells . TSLP signals cells via the interleukin-7 receptor- α chain (IL-7R α), shared with IL-7, together with the TSLP receptor (TSLPR) subunit. Recent studies indicate that TSLP and its receptor are novel therapeutic targets for rheumatoid arthritis, for increased intraarticular TSLP concentrations in patients has caused chemotaxis and activation of arthritogenic T cells.

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