

Recombinant Human Thymic Stromal Lymphopoietin (rh TSLP)

Synonyms: none

Introduction: TSLP protein is a hemopoietic cytokine which signals throughout a heterodimeric receptor complex composed of the thymic stromal lymphopoietin receptor & the Interleukin-7 receptor alpha chain. TSLP impacts myeloid cells thus induces the discharge of T cell-attracting chemokines from monocytes & increases the growth of CD11c(+) dendritic cells. TSLP is mainly expressed in the heart, liver and prostate. TSLP is related in its biological activities with IL-7 and binds with the heterodimeric receptor complex consisting of the Interleukin-7 receptor alpha chain & the TSLPR. Similar to IL-7, TSLP enhances phosphorylation of STAT3 and STAT5, though uses kinases excluding JAKs for its activation. TSLP induces the release of T cell-attracting chemokines such as TARC & MDC from monocytes & triggers CD11c(+) dendritic cells. TSLP activated dendritic cells primes naive T cells to manufacture pro-allergic cytokines such as Interleukin-4, Interleukin-5, Interleukin-13 and TNF-alpha whereas down-regulating Interleukin-10 and IFN-gamma play a role in the initiation of allergic inflammation.

Description: Recombinant human Thymic Stromal Lymphopoietin produced in E.Coli is a single, non-glycosylated polypeptide chain containing 132 amino acids and having a molecular mass of 15 kDa.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a 0.22µm filtered solution in phosphate buffered saline, pH 7.2. The aliquots/samples of 1µg contain Trehalose 5% (w/vol) for better recovery

Reconstitution: It is recommended to reconstitute the lyophilized TSLP in sterile H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized TSLP although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution TSLP should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity: 95.0% as determined by SDS-PAGE / silver stain.

Endotoxicity: The endotoxin level is less than 1 EU/µg determined by LAL method.

Amino acid sequence:

MYDFTNCDFE KIKAAYLSTI SKDLITYMSG TKSTEFNNTV SCSNRPHCLT EIQLSTFNPT AGCASLAKEM
FAMKTKAALA IWCPGYSETQ INATQAMKKR RKRKVTTNKC LEQVSQLQGL WRRFNRPLLK QQ

Biological Activity: By testing its ability to induce STAT activation in Ba/F3 h TSLPR transfectants the ED₅₀ is found to be < 0.3 ng/ml.

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<i>small</i>	5 µg	Cat.N°	11343490
<i>medium</i>	20 µg	Cat.N°	11343494
<i>large</i>	100 µg	Cat.N°	11343496
<i>x-large</i>	500 µg	Cat.N°	11343497

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