

TSLP, Human

Cat. No.: Z02721-1

Size: 1.0 mg

Synonyms: Thymic Stromal Lymphopoietin (TSLP), Human;

Description:

TSLP is a hemopoietic protein that is expressed in the heart, liver and prostate. TSLP overlaps biological activities with IL-7 and binds with the heterodimeric receptor complex consisting of the IL-7R alpha chain (IL-7R^α) and the TSLP-specific chain (TSLPR). Like IL-7, TSLP induces phosphorylation of STAT3 and STAT5, but uses kinases other than the JAKs for activation. TSLP prohibited apoptosis and stimulated growth of the human acute myeloid leukemia (AML)-derived cell line MUTZ3. It induces the release of T cell-attracting chemokines TARC and MDC from monocytes and activates CD11c(+) dendritic cells (DCs). TSLP activated DCs primed naive 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.

Amino Acid Sequence:

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00001 MYDFTNCDPE KIKAAYLSTI SKDLITYMSG TKSTEFNNTV
00041 SCSNRPHCLT EIQLTFNPT AGCASLAKEM FAMKTKAALA
00081 IWCPGYSETQ INATQAMKKR RKRKVTTNKC LEQVSQLQGL
00121 WRRFNRPLLK QQ
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Source: *E. coli*

Species: Human

Biological Activity: Fully biologically active when compared to standard. The ED₅₀ as determined by a cell proliferation assay using human IL-7R α 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 × 10⁶ IU/mg.

Molecular Weight: Approximately 15.1 kDa, a single non-glycosylated polypeptide chain containing 132 amino acids.

Formulation: Lyophilized from a 0.2 μ m filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl.

Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

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 \leq -20 °C. Further dilutions should be made in appropriate buffered solutions.

Purity: > 98 % by SDS-PAGE and HPLC analyses.

Endotoxin Level: Less than 1 EU/ μ g of rHuTSLP as determined by LAL method.

Storage: This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles.