



## User Manual

**Thymic Stromal Lymphopoietin (TSLP) (Human)**

**Cat. No. HEOPP-20062**

**Description:**

Thymic Stromal Lymphopoietin (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 $\alpha$ ) 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 $\alpha$ ) while down-regulating IL-10 and IFN- $\gamma$  suggesting a role in initiating allergic inflammation.

**Source:**

*Escherichia coli*

**Unit:**

10  $\mu$ g

**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  $< -20^{\circ}\text{C}$ . Further dilutions should be made in appropriate buffered solutions.

**Formulation:**

Lyophilized from a 0.2  $\mu$ m filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl.

**Storage:**

This lyophilized preparation is stable at 2-8 $^{\circ}\text{C}$ , but should be kept at -20 $^{\circ}\text{C}$  for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 $^{\circ}\text{C}$ . For maximal stability, apportion the reconstituted preparation into working

aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

**Molecular Weight:**

Approximately 15.0 kDa, a single non-glycosylated polypeptide chain containing 132 amino acids.

**Endotoxin:**

Less than 1 EU/μg of TSLP as determined by LAL method.

**Usage:**

This material is offered by Cyagen Biosciences for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.

**Biological Activity:**

The ED50 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.

**AA Sequence:**

MYDFTNCD FE KIKAA YLSTI SKDLITYMSG TKSTEFNNTV SCSNRPHCLT EIQSLTFNPT  
AGCASLAKEM FAMKTKAALA IWCPGYSETQ INATQAMKKR RKRKVTTNKC  
LEQVSQLQGL WRRFNRPLLK QQ

**Purity:**

> 98% by SDS-PAGE and HPLC analyses.

Material Safety Data Sheets (MSDSs) are available upon request.

The Certificate of Analysis (COA), which provides detailed quality control information for each product, is also available at the Cyagen website.

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