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Products	Human TSLP, research grade. Recombinant human thymic stromal lymphopoietin.						
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Content in µg	Order no.						
2	130-106-271						
10	130-106-270						
Primary structure	Single, non-glycosylated polypeptide chain including N-terminal methionine (132 amino acid residues).						
Molecular mass	15.1 kDa.						
Source	Produced in <i>E. coli</i> .						
Product format	Lyophilized from a filtered (0.2 µm) buffer solution.						
Stabilizer	None.						
Purity	>97% as determined by SDS-PAGE analysis.						
Endotoxin level	Low endotoxin (<1.0 EU/µg cytokine) as determined by Limulus Amebocyte Lysate (LAL) assay.						
Storage	Lyophilized Human TSLP, research grade should be stored at -20 °C. The expiration date is indicated on the vial label. Upon reconstitution aliquots should be stored at -20 °C or below. Avoid repeated freeze-thaw cycles.						
Reconstitution	It is recommended to reconstitute lyophilized Human TSLP, research grade with deionized sterile-filtered water to a final concentration of 0.1–1.0 mg/mL in a minimal volume of 20 µL. Further dilutions should be prepared with 0.1% bovine serum albumin (BSA) or human serum albumin (HSA) in phosphate-buffered saline.						

1.1 Background information

TSLP is a hematopoietic cytokine that plays a critical role as regulator of T helper (Th)2 driven inflammation. It is highly expressed in skin keratinocytes and airway epithelial cells as well as in gut and thymus. TSLP is an interleukin 7 (IL-7)-like cytokine that binds to a heterodimeric receptor complex consisting of the alpha chain of the IL-7 receptor (IL-7Rα) and the TSLP receptor chain (TSLPR). It is able to promote the activation of B cells and dendritic cells (DCs). TSLP activated DCs polarize naive CD4⁺ T

cells to differentiate into inflammatory Th2 cells that produce the pro-allergic cytokines IL-4, IL-5, IL-13, and TNF-α. Furthermore TSLP supports B cell expansion and differentiation. It induces the release of T cell-attracting chemokines from monocytes and enhances the maturation of CD11c⁺ DCs. Like IL-7, TSLP has been shown to activate and phosphorylate the transcription factors STAT3 and STAT5.

1.2 Applications

Human TSLP can be used for a variety of applications, including:

- Activation of immature DCs.
- Expansion, differentiation, and activation of B cells.
- Support in T cell growth and survival.
- Studies on initiation of allergic diseases.

Optimal concentration for a specific application should be determined by a dose-response experiment.

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