

DESCRIPTION

Source	<i>E. coli</i> -derived Tyr29-Gln159, with an N-terminal Met Accession # Q969D9.1
N-terminal Sequence Analysis	Met
Predicted Molecular Mass	15 kDa

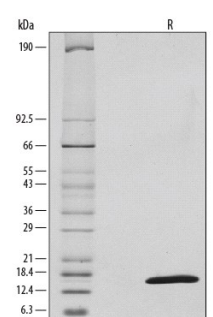
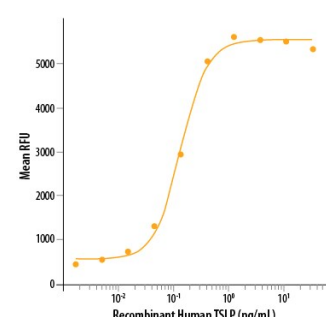
SPECIFICATIONS

Activity	Measured in a cell proliferation assay using BaF3 mouse pro-B cells co-transfected with human IL-7 R α and human TSLP R. Reche, P.A. <i>et al.</i> (2001) <i>J. Immunol.</i> 167 :336. The ED ₅₀ for this effect is typically 0.05-0.3 ng/mL.
Endotoxin Level	<0.10 EU per 1 μ g of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 μ g/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

<p>SDS-PAGE</p>  <p>1 μg/lane of Recombinant Human TSLP was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing a single band at 14 kDa.</p>	<p>Bioactivity</p>  <p>Recombinant Human TSLP (Catalog # 1398-TS/CF) stimulates cell proliferation in the BaF3 mouse pro-B cell line transfected with human IL-7 Rα and human TSLP R. The ED₅₀ for this effect is typically 0.05-0.3 ng/mL.</p>
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BACKGROUND

Thymic Stromal Lymphopoietin (TSLP) was originally identified as an activity from the conditioned medium of a mouse thymic stromal cell line that promoted the development of B cells (1 - 3). The activities of mouse TSLP overlap with, but are distinct from, those of mouse IL-7. Both mouse TSLP and IL-7 can co-stimulate growth of thymocytes and mature T cells, and support B lymphopoiesis in long-term cultures of fetal liver cells and bone-marrow cells. Whereas mouse IL-7 facilitates the development of B220⁺/IgM⁻ pre-B cells, mouse TSLP promotes the development B220⁺/IgM⁺ B cells. Human TSLP was reported to preferentially stimulate myeloid cells; inducing the release of T cell-attracting chemokines from monocytes and enhancing the maturation of CD11c⁺ dendritic cells. Human TSLP cDNA encodes a 159 amino acid (aa) residue precursor protein with a 28 aa signal sequence (4, 5). Within the mature region, six of the seven cysteine residues present in the mouse TSLP involved in intramolecular disulfide bond formation are conserved in the human TSLP. Human TSLP shares approximately 43% aa sequence identity with mouse TSLP. By Northern blot analysis, human TSLP expression has been detected in many tissues with the highest expressions in heart, liver, testis and prostate. TSLP signals through a heterodimeric receptor complex that consists of IL-7 R α and the TSLP R, a member of the hemopoietin receptor family most closely related to R γ _c.

References:

1. Sims, J.E. *et al.* (2000) *J. Exp. Med.* **192**:671.
2. Park, L.S. *et al.* (2000) *J. Exp. Med.* **192**:659.
3. Pandey, A. *et al.* (2000) *Nature Immunol.* **1**:59.
4. Reche, P.A. *et al.* (2001) *J. Immunol.* **167**:336.
5. Quentmeier, H. *et al.* (2001) *Leukemia* **15**:1286.