

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Tyr20-Glu140, with a C-terminal 10-His tag
Accession # NP_067342

N-terminal Sequence Analysis Tyr20

Predicted Molecular Mass 15 kDa

SPECIFICATIONS

SDS-PAGE 22-29 kDa, reducing conditions

Activity Measured in a cell proliferation assay using BaF3 mouse pro-B cells transfected with mouse IL-7 R α .
The ED₅₀ for this effect is 0.5-2.5 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 with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 μ g/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

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.

- 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.

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. 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. Mouse TSLP cDNA encodes a 140 amino acid (aa) residue precursor protein with a 19 aa signal sequence. Within the mature region, there are three potential N-glycosylation sites and 7 cysteine residues. Mouse TSLP shares approximately 43% aa sequence identity with human TSLP. The gene for mouse TSLP has been localized to chromosome 18. By Northern and RT-PCR analysis, mouse TSLP expression has been detected in spleen, thymus, kidney, lung and bone marrow. TSLP is proposed to signal through a heterodimeric receptor complex that consists of IL-7 R α and the TSLP R, a new member of the hemopoietin receptor family most closely related to Ryc.

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.