

TSLP (L-18): sc-19177

BACKGROUND

Thymic stromal lymphopoietin (TSLP) is a novel member of the hemopoietic cytokine family that promotes the development of B cells and shares overlapping activity with IL-7. The gene encoding murine TSLP maps to chromosome 18 and its human homologue is expressed in several tissues, including heart, liver and prostate. TSLP mediates its function by binding to a receptor complex. TSLP first binds with low affinity to a TSLP-specific chain designated TSLPR, and then forms a high affinity complex with the IL-7R α subunit, which explains the overlapping biological properties between TSLP and IL-7. Both TSLP and IL-7 induce phosphorylation of the transcription factor Stat5, but unlike IL-7, TSLP-mediated signaling does not activate the JAKs. TSLP prevents apoptosis and stimulates the proliferation of myeloid cells, which is supported by the coexpression of TSLPR and IL-7R α on monocytes and dendritic cells.

REFERENCES

- Levin, S.D., et al. 1999. Thymic stromal lymphopoietin: a cytokine that promotes the development of IgM⁺ B cells *in vitro* and signals via a novel mechanism. *J. Immunol.* 162: 677-683.
- Isaksen, D.E., et al. 1999. Requirement for stat5 in thymic stromal lymphopoietin-mediated signal transduction. *J. Immunol.* 163: 5971-5977.
- Sims, J.E., et al. 2000. Molecular cloning and biological characterization of a novel murine lymphoid growth factor. *J. Exp. Med.* 192: 671-680.
- Pandey, A., et al. 2000. Cloning of a receptor subunit required for signaling by thymic stromal lymphopoietin. *Nat. Immunol.* 1: 59-64.
- Park, L.S., et al. 2000. Cloning of the murine thymic stromal lymphopoietin (TSLP) receptor: formation of a functional heteromeric complex requires interleukin 7 receptor. *J. Exp. Med.* 192: 659-670.
- Reche, P.A., et al. 2001. Human thymic stromal lymphopoietin preferentially stimulates myeloid cells. *J. Immunol.* 167: 336-343.
- Quentmeier, H., et al. 2001. Cloning of human thymic stromal lymphopoietin (TSLP) and signaling mechanisms leading to proliferation. *Leukemia* 15: 1286-1292.

CHROMOSOMAL LOCATION

Genetic locus: Tslp (mouse) mapping to 18 B1.

SOURCE

TSLP (L-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TSLP of mouse origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-19177 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TSLP (L-18) is recommended for detection of precursor and mature TSLP of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TSLP siRNA (m): sc-39821, TSLP shRNA Plasmid (m): sc-39821-SH and TSLP shRNA (m) Lentiviral Particles: sc-39821-V.

Molecular Weight of TSLP: 16 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Ohba, T., et al. 2008. A potential role of thymic stromal lymphopoietin in the recruitment of macrophages to mouse intervertebral disc cells via monocyte chemoattractant protein 1 induction: implications for herniated discs. *Arthritis Rheum.* 58: 3510-3519.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.