

TSLP (FL-159): sc-33791

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. Its human homolog is expressed in several tissues, including heart, liver and prostate. TSLP mediates its function by binding to a receptor complex: first binding with low affinity to a TSLP-specific chain designated TSLPR, then forming 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., Koelling, R.M., Friend, S.L., Isaksen, D.E., Ziegler, S.F., Perlmutter, R.M. and Farr, A.G. 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., Baumann, H., Trobridge, P.A., Farr, A.G., Levin, S.D. and Ziegler, S.F. 1999. Requirement for Stat5 in thymic stromal lymphopoietin-mediated signal transduction. *J. Immunol.* 163: 5971-5977.
- Park, L.S., Martin, U., Garka, K., Gliniak, B., Di Santo, J.P., Muller, W., Largaespada, D.A., Copeland, N.G., Jenkins, N.A., Farr, A.G., Ziegler, S.F., Morrissey, P.J., Paxton, R. and Sims, J.E. 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.
- Sims, J.E., Williams, D.E., Morrissey, P.J., Garka, K., Foxworthe, D., Price, V., Friend, S.L., Farr, A., Bedell, M.A., Jenkins, N.A., Copeland, N.G., Grabstein, K. and Paxton, R.J. 2000. Molecular cloning and biological characterization of a novel murine lymphoid growth factor. *J. Exp. Med.* 192: 671-680.
- Pandey, A., Ozaki, K., Baumann, H., Levin, S.D., Puel, A., Farr, A.G., Ziegler, S.F., Leonard, W.J. and Lodish, H.F. 2000. Cloning of a receptor subunit required for signaling by thymic stromal lymphopoietin. *Nat. Immunol.* 1: 59-64.
- Quentmeier, H., Drexler, H.G., Fleckenstein, D., Zaborski, M., Armstrong, A., Sims, J.E. and Lyman, S.D. 2001. Cloning of human thymic stromal lymphopoietin (TSLP) and signaling mechanisms leading to proliferation. *Leukemia* 15: 1286-1292.

CHROMOSOMAL LOCATION

Genetic locus: TSLP (human) mapping to 5q22.1.

SOURCE

TSLP (FL-159) is a rabbit polyclonal antibody raised against amino acids 12-159 mapping at the C-terminus of TSLP of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TSLP (FL-159) is recommended for detection of TSLP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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 (h): sc-45234, TSLP shRNA Plasmid (h): sc-45234-SH and TSLP shRNA (h) Lentiviral Particles: sc-45234-V.

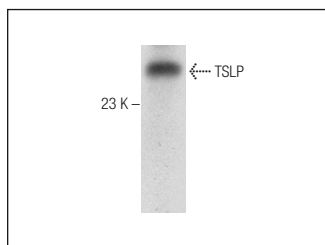
Molecular Weight of TSLP: 18 kDa.

Positive Controls: human prostate extract: sc-363774.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TSLP (FL-159): sc-33791. Western blot analysis of TSLP expression in human prostate tissue extract.

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.