SANTA CRUZ BIOTECHNOLOGY, INC.

TSLPR (4A11): sc-293312

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 homologue 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, (also designated CRLF2, cytokine receptor-like factor 2), then forming a high affinity complex with the IL-7Rα 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-7Rα on monocytes and dendritic cells.

REFERENCES

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2. Isaksen, D.E., et al. 1999. Requirement for Stat5 in thymic stromal lymphopoietin-mediated signal transduction. J. Immunol. 163: 5971-5977.
3. 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.
4. Sims, J.E., et al. 2000. Molecular cloning and biological characterization of a novel murine lymphoid growth factor. J. Exp. Med. 192: 671-680.
5. Pandey, A., et al. 2000. Cloning of a receptor subunit required for signaling by thymic stromal lymphopoietin. Nat. Immunol. 1: 59-64.
6. Quentmeier, H., et al. 2001. Cloning of human thymic stromal lympho-poietin (TSLP) and signaling mechanisms leading to proliferation. Leukemia 15: 1286-1292.
7. Reche, P.A., et al. 2001. Human thymic stromal lymphopoietin preferentially stimulates myeloid cells. J. Immunol. 167: 336-343.

CHROMOSOMAL LOCATION

Genetic locus: CRLF2 (human) mapping to Xp22.33/Yp11.32.

SOURCE

TSLPR (4A11) is a mouse monoclonal antibody raised against amino acids 23-132 of TSLPR of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

TSLPR (4A11) is recommended for detection of TSLPR of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TSLPR siRNA (h): sc-91575, TSLPR shRNA Plasmid (h): sc-91575-SH and TSLPR shRNA (h) Lentiviral Particles: sc-91575-V.

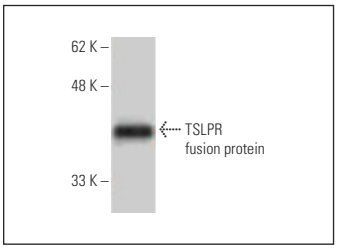
Molecular Weight (predicted) of TSLPR isoforms: 27/42 kDa.

Molecular Weight (observed) of TSLPR: 40/49 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



TSLPR (4A11): sc-293312. Western blot analysis of human recombinant TSLPR fusion protein.

SELECT PRODUCT CITATIONS

1. Kang, Y.M., et al. 2024. Indole-3-carbinol alleviates allergic skin inflammation via periostin/thymic stromal lymphopoietin suppression in atopic dermatitis. Chin. Med. 19: 177.

RESEARCH USE

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

PROTOCOLS

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