Human TSLPR Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF981

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TSLP R in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human TSLP R Val30-Phe232 Accession # Q9HC73
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

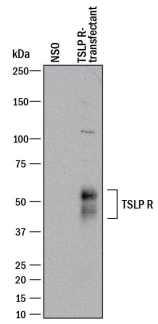
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.2-1 µg/mL	See Below
Immunocytochemistry	5-25 µg/mL	Immersion fixed THP-1 human acute monocytic leukemia cell line treated with PMA
Immunohistochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize TSLP-induced proliferation in the BaF3 mouse pro-B cell line co-transfected with human IL-7 Rα and TSLP R. The Neutralization Dose (ND_{50}) is typically 1-5 µg/mL in the presence of 0.3 ng/mL Recombinant Human TSLP.	

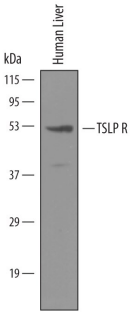
DATA

Western Blot



Detection of Human TSLP R by Western Blot. Western blot shows lysates of NS0 mouse myeloma cell line either mock transfected or transfected with human TSLP R. PVDF membrane was probed with 0.2 µg/mL of Goat Anti-Human TSLP R Antigen Affinity-purified Polyclonal Antibody (Catalog # AF981) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # Catalog # HAF017). Specific bands were detected for TSLP R at approximately 45-60 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Western Blot



Detection of Human TSLP R by Western Blot. Western blot shows lysates of human liver tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human TSLP R Antigen Affinity-purified Polyclonal Antibody (Catalog # AF981) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # Catalog # HAF019). A specific band was detected for TSLP R at approximately 50 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

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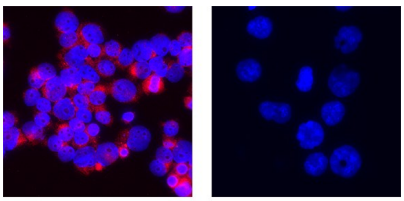
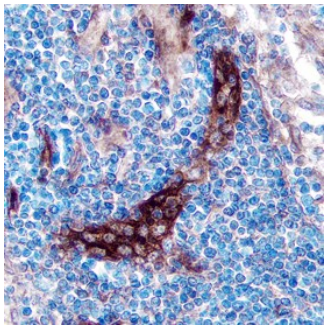
Immunocytochemistry



THP-1 cells + PMA | K562 cells

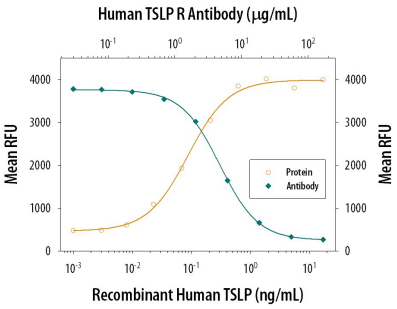
TSLPR in THP-1 Human Cell Line. TSLPR was detected in immersion fixed THP-1 human acute monocytic leukemia cell line treated with PMA (positive staining) and K562 human chronic myelogenous leukemia cell line (negative staining) using Goat Anti-Human TSLPR Antigen Affinity-purified Polyclonal Antibody (Catalog # AF981) at 25 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm and cell surface. Staining was performed using our protocol for Fluorescent ICC Staining of Non-adherent Cells.

Immunohistochemistry



TSLP R in Human Lymph Node. TSLP R was detected in immersion fixed paraffin-embedded sections of human lymph node using Goat Anti-Human TSLP R Antigen Affinity-purified Polyclonal Antibody (Catalog # AF981) at 5 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # Catalog # CTS008) and counter-stained with hematoxylin (blue). Specific staining was localized to the plasma membrane. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Neutralization



Cell Proliferation Induced by TSLP and Neutralization by Human TSLP R Antibody. Recombinant Human TSLP (Catalog # Catalog # 1398-TS) stimulates proliferation in the BaF3 mouse pro-B cell line co-transfected with human IL-7 Ra and TSLP R in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human TSLP (0.3 ng/mL) is neutralized (green line) by increasing concen-trations of Goat Anti-Human TSLP R Antigen Affinity-purified Polyclonal Antibody (Catalog # AF981). The ND_{50} is typically 1-5 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
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. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

TSLP R, also named Delta (1) and CRLM-2 (2) (cytokine receptor-like module-2), was originally cloned as a novel type 1 cytokine receptor with similarity to the common gamma chain. It was subsequently identified to be a subunit of the cellular receptor for the IL-7-like cytokine TSLP and termed TSLP R (3). The human TSLP R cDNA encodes a 371 amino acid (aa) residue type 1 membrane protein with a 22 aa residue signal peptide, a 210 aa residue extracellular domain, a 20 aa residue transmembrane domain, and a 119 aa residue cytoplasmic domain (4, 5). The extracellular region contains two fibronectin type III-like domains and a WSXWS-like motif. The cytoplasmic domain contains a membrane-proximal box 1 motif that is known to be important for association with JAKs (4). Human TSLP R displays 39% identity to mouse TSLP R and 24% identity to the common gamma receptor (4). An alternatively spliced mRNA variant encoding a soluble TSLP R has also been reported in mouse (2). TSLP R expression is ubiquitous in the immune and hematopoietic cells, but is up-regulated in Th2-skewed cells. Cells expressing TSLP R alone bind TSLP with low affinity. Co-expression of TSLP R and IL-7 Rα is required for high-affinity TSLP binding and signal transduction (3-6). The TSLP R and IL-7 Rα are coexpressed primarily on monocytes and dendritic cells and at lower levels in lymphoid cells. TSLP has been shown to induce the release of T cell-attracting chemokines from monocytes and enhance the maturation of $CD11c^+$ dendritic cells (5).

References:

1. Fujio, K. *et al.* (2000) Blood **95**:2204.
2. Hiroyama, T. *et al.* (2000) Biochem. Biophys. Res. Commun. **272**:224.
3. Park, L.S. *et al.* (2000) J. Exp. Med. **192**:659.
4. Tonozuka, Y. *et al.* (2001) Cytogenet. Cell Genet. **93**:23.
5. Reche, P.A. *et al.* (2001) J. Immunol. **167**:336.
6. Pandey, A. *et al.* (2000) Nat. Immunol. **1**:59.

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