

Biotin anti-human TSLP Antibody

Catalog# / Size	515903 / 50 µg
Clone	Poly5159
Regulatory Status	RUO
Other Names	Thymic stromal lymphopoietin (TSLP)
Isotype	Goat Polyclonal Ig
Description	<p>TSLP was initially identified in conditioned medium from a mouse thymic stromal cell line. Human and mouse TSLP are only 43% identical at the amino acid level, and TSLP, like IL-7, exhibits species-specific functions and may function differently in humans and mice. TSLP binds to a heterodimeric receptor constituted by IL-7Ra and TSLPR. TSLPR has low affinity for TSLP, but in combination with IL-7Ra generates a high affinity binding site. TSLP has been associated with the development of allergic disorders in humans, such as asthma, atopic dermatitis, and food allergies. The susceptibility to allergic diseases has been associated to basophil induction by TSLP, and Th2 cytokine production induced by TSLP in mast cells. In addition, TSLP has been associated to the development of Tregs, and blocking TSLPR leads to delayed functional maturation of thymic Tregs. TSLPR has been detected in Tregs from allergic asthmatic patients. TSLP directly activates STAT5 in Tregs and suppresses its suppressive activities; additionally, it inhibits IL-10 production. Human TSLP induces the release of T cell-attracting chemokines (CCL17 and CCL22) from monocytes and enhances the T cell stimulatory capacity of the CD11c⁺ subset of dendritic cells. TSLP induces proliferation of naïve T cells. In addition, it can drive Th2 differentiation via the induction of IL-4 production, and drives Th2 cytokine-mediated inflammation by acting on bone marrow-resident progenitors, which promotes basophil hematopoiesis. TSLP is upregulated in epithelial cells by IL-1α, TNFα, and Th2 cytokines.</p>

Product Details

Verified Reactivity	Human
Antibody Type	Polyclonal
Host Species	Goat
Immunogen	Recombinant human TSLP, amino acids Tyr29-Gln159 (Accession# AF338732), was expressed in <i>E.coli</i> .
Formulation	Phosphate-buffered solution, pH 7.2, containing 1% BSA (USA origin) and 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with biotin under optimal conditions.
Concentration	0.2 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	ELISA Detection - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by ELISA assay . For use as an ELISA detection antibody, a concentration range of 0.25-1 µg/ml is recommended. It is recommended that the reagent be titrated for optimal performance. To obtain a linear standard curve, serial dilutions of TSLP recombinant protein ranging from 1000 to 7.8 pg/ml are recommended.
Application Notes	ELISA Detection: The biotinylated Poly5159 antibody is useful as a detection antibody for a sandwich ELISA assay, when used in conjunction with purified 15B11.3 (Cat. No. 512202) or purified poly5159 (Cat. No. 515901) antibody as the capture antibody.
RRID	AB_2561410 (BioLegend Cat. No. 515903)

Antigen Details

Distribution	Epithelial cells, mast cells, basophils, epidermal keratinocytes in atopic dermatitis, synovial fibroblast in arthritis rheumatoid, human airway smooth muscle cells
Function	Induces proliferation of naïve T cells, the release of T cell-attracting chemokines (CCL17 and CCL22) from monocytes, and the T cell stimulatory capacity of CD11c+ subset of dendritic cells; drives Th2 differentiation, drives Th2 cytokine-mediated inflammation to promote basophil hematopoiesis
Interaction	Monocyte, dendritic cells, activated human basophils, activated human T cells, Langerhans cells, B cells, mast cells, activated pulmonary Tregs, NKT cells
Ligand/Receptor	Heterodimeric receptor complex composed of the IL-7 receptor α chain (IL-7R α) and the TSLP receptor (TSLPR or CRLF2)
Cross	Not cross-reactive with recombinant mouse TSLP.
Cell Type	Basophils, Epithelial cells, Fibroblasts, Mast cells
Biology Area	Immunology
Molecular Family	Cytokines/Chemokines
Antigen References	<ol style="list-style-type: none"> 1. Levin SD, <i>et al.</i> 1999. <i>J. Immunol.</i> 162:677. 2. Reche PA, <i>et al.</i> 2001. <i>J. Immunol.</i> 167:336. 3. Omori M and Steven Ziegler. 2007. <i>J. Immunol.</i> 178:1396. 4. Rochman I, <i>et al.</i> 2007. <i>J. Immunol.</i> 178:6720. 5. Mazzuchelli R, <i>et al.</i> 2008. <i>Blood</i> 112:3283. 6. Siracusa MC, <i>et al.</i> 2011. <i>Nature</i> 477:229. 7. Nguyen KD, <i>et al.</i> 2010. <i>Allergy Asthma Clin. Immunol.</i> 6:4.
Gene ID	85480

Related Protocols

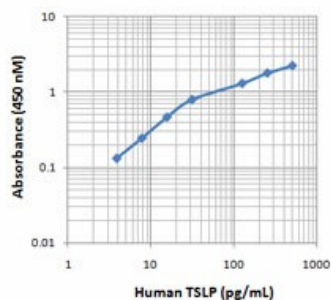
[Active Protocols: Sandwich ELISA - Video](#)

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Other Formats

Purified anti-human TSLP, Biotin anti-human TSLP

Product Data



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