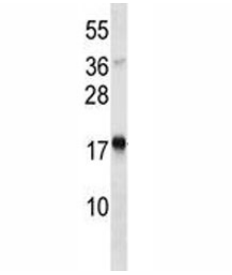
TSLP Antibody / Thymic stromal lymphopoietin (F44506)

Catalog No.	Formulation	Size
F44506-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F44506-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	Q969D9
Localization	Secreted
Applications	Western Blot : 1:1000
Limitations	This TSLP antibody is available for research use only.



TSLP antibody western blot analysis in Jurkat lysate. Predicted molecular weight ~18 kDa.

Description

TSLP antibody targets thymic stromal lymphopoietin, a secreted cytokine encoded by the TSLP gene that plays a central role in immune regulation at epithelial barrier surfaces. Thymic stromal lymphopoietin is primarily produced by epithelial cells in tissues such as skin, lung, and gastrointestinal mucosa, where it functions as an important mediator linking environmental stimuli to immune cell activation. As a member of the cytokine network involved in type 2 immune responses, TSLP contributes to shaping local immune environments in both homeostatic and inflammatory settings.

At the cellular level, thymic stromal lymphopoietin acts through a heterodimeric receptor complex composed of the TSLP receptor and the interleukin 7 receptor alpha chain. Engagement of this receptor complex initiates intracellular signaling cascades that influence the behavior of multiple immune cell types, including dendritic cells, T lymphocytes, innate lymphoid cells, and mast cells. Through these interactions, TSLP promotes immune cell maturation, survival, and cytokine production, thereby coordinating downstream adaptive and innate immune responses. TSLP antibody reagents enable investigation of these signaling pathways by allowing detection and analysis of TSLP expression in relevant biological contexts.

TSLP expression is tightly regulated and often induced in response to epithelial stress, tissue damage, infection, or allergen exposure. Elevated levels of thymic stromal lymphopoietin have been observed in conditions associated with barrier dysfunction, where epithelial derived signals influence immune cell recruitment and activation. At the tissue level, TSLP localization reflects its role as a cytokine that operates at the interface between the external environment and the immune system, highlighting its importance in mucosal and cutaneous immunity.

Structurally, thymic stromal lymphopoietin is a small secreted protein belonging to the cytokine family, with a folded structure that supports receptor binding and signal initiation. Although it shares functional similarities with interleukin family cytokines, TSLP has distinct receptor usage and biological effects. Regulation of TSLP activity may occur at multiple levels, including transcriptional control, epithelial cell differentiation state, and interactions with immune cell receptors. Use of a TSLP antibody supports research into these regulatory mechanisms and their impact on immune signaling networks.

From a disease relevance perspective, thymic stromal lymphopoietin has been extensively studied in the context of allergic inflammation and immune mediated disorders. Dysregulated TSLP expression has been linked to altered immune cell activation and skewing of immune responses toward type 2 phenotypes. In research settings, analysis of TSLP expression provides insight into epithelial immune crosstalk, inflammatory signaling pathways, and tissue specific immune regulation. TSLP antibody reagents are therefore valuable tools for examining cytokine driven immune processes and epithelial immune interactions.

A TSLP antibody is suitable for detecting thymic stromal lymphopoietin expression in research applications focused on immune regulation, epithelial biology, and inflammatory signaling. By enabling specific recognition of this cytokine, TSLP antibody tools support studies of immune communication at barrier tissues and the molecular mechanisms that govern immune homeostasis and disease associated immune responses, with NSJ Bioreagents providing antibodies intended for research use.

Application Notes

Titration of the TSLP antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 101-130 from the human protein was used as the immunogen for this TSLP antibody.

Storage

Aliquot the TSLP antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.