Biotinylated Recombinant Human TSLPR His-tag

Catalog Number: BT10843

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human TSLPR protein Gln23-Lys231, with a C-terminal 6-His tag Accession # Q9HC73.1
N-terminal Sequence Analysis	Gln23 inferred from enzymatic pyroglutamate treatment revealing Gly24
Structure / Form	Biotinylated via amines
Predicted Molecular Mass	25 kDa

SPECIFICATIONS

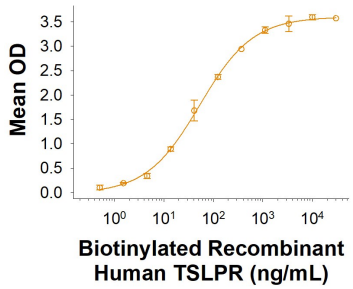
SDS-PAGE	37-47 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. Biotinylated Recombinant Human TSLPR His-tag (Catalog # BT10843) binds Recombinant Human TSLP (Catalog # 1398-TS/CF) with an ED_{50} of 25.0-300 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in water.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

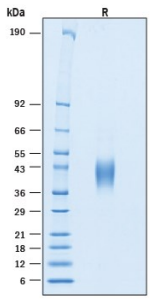
DATA

Binding Activity



Biotinylated Recombinant Human TSLPR His-tag Protein Binding Activity. Biotinylated Recombinant Human TSLPR His-tag Protein (Catalog # BT10843) binds Recombinant Human TSLP (Catalog # 1398-TS/CF) with an ED_{50} of 25.0-300 ng/mL.

SDS-PAGE



Biotinylated Recombinant Human TSLPR His-tag Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human TSLPR His-tag Protein (Catalog # BT10843) was resolved with SDS-PAGE under reducing (R) condition and visualized by Coomassie® Blue staining, showing bands at 37-47 kDa.

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BACKGROUND

Thymic stromal lymphopoietin receptor (TSLPR), also known cytokine receptor-like module 2 (CRLM-2) and IL-XR, is a member of the type 1 cytokine receptor family. TSLPR has been identified most closely related to the common gamma chain (γc) and, when complexed with interleukin 7 receptor alpha (IL-7Rα), forms a high affinity complex for the IL-7-like cytokine TSLP (1-4). The extracellular domain (ECD) of human TSLPR contains two fibronectin type III-like domains and a WSXWS-like motif, which is necessary for proper protein folding (1-4). The cytoplasmic domain contains a membrane-proximal box 1 motif that is important for association with JAKs (2, 3). The ECD of Human TSLPR shares 34% amino acid sequence identity with the ECD of mouse TSLPR. An alternatively spliced mRNA variant encoding a soluble TSLPR has also been reported in mouse (5). In the signaling pathway of TSLP-TSLPR, which is similar to that of IL-7, TSLP activates the transcription factor signal transducer and activator of transcription 3 (STAT3), inducing the expression of common genes (4). TSLPR expression is ubiquitous in the immune and hematopoietic cells but is up-regulated in Th2-skewed cells (3, 4). Elevated expression of TSLP-TSLPR in bronchial mucosa has been associated with human asthma by acting as a susceptibility factor to generate Th2 allergic responses to antigens (4, 6). TSLP also is involved in Th2-mediated allergic skin inflammation by inducing Th2 cytokine secretion by T cells during the effector phase of allergic skin inflammation (4, 7). TSLP has been shown to induce the release of T cell-attracting chemokines from monocytes and enhance the maturation of CD11c+ dendritic cells (DC) (4). TSLP activated human DCs are also involved in the homeostatic proliferation of naïve and memory T cells in the absence of foreign antigens (4).

References:

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