

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived human TSLPR protein		
	Human TSLP R (Gly25-Lys231) Accession #Q9HC73	DIEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence	Gly25		
Analysis			
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	50.6 kDa (monomer)		

SPECIFICATIONS

SDS-PAGE	65-75 kDa, reducing conditions
Activity	Measured by its ability to inhibit TSLP-dependent proliferation of BaF3 mouse pro-B cells co-transfected with human IL-7 R α and human TSLP R. The ED ₅₀ for this effect is 10-30 μ g/mL in the presence of 0.2 ng/mL of recombinant human TSLP.
Endotoxin Level	<0.10 EU per 1 μ g of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 μ g/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 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.

BACKGROUND

TSLPR, 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 TSLPR (3). The human TSLPR 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 TSLPR displays 39% identity to mouse TSLPR and 24% identity to the common gamma receptor (4). An alternatively spliced mRNA variant encoding a soluble TSLPR has also been reported in mouse (2). TSLPR expression is ubiquitous in the immune and hematopoietic cells, but is up-regulated in Th2-skewed cells. Cells expressing TSLPR alone bind TSLP with low affinity. Co-expression of TSLPR and IL-7 R α is required for high-affinity TSLP binding and signal transduction (3-6). The TSLPR and IL-7 R α are co-expressed 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. Hiroshima, T. *et al.* (2000) *Biochem. Biophys. Res. Commun.* **272**:224.
3. Park, L.S. *et al.* (2000) *J. Exp. Med.* **192**:659.
4. Tonzuka, 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.