DATASHEET

Recombinant Human Thymic Stromal Lymphopoietin

CAT. NO. ARP6724

KEY FEATURES

Target	Thymic Stromal Lymphopoietin	Source/Expression System	E.coli
Reactivity	Human	Aapplication	SDS-PAGE
Abbreviation	rHuTSLP	Synonyms	thymic stromal lymphopoietin; TSLP

BACKGROUND

Thymic stromal lymphopoietin (TSLP) is a hemopoietic protein belonging to the cytokine family and is known to play an important role in the maturation of T cell populations through activation of antigen presenting cells. It is mainly expressed in a number of tissues including heart, liver and prostate. TSLP signals through a heterodimeric receptor complex composed of the thymic stromal lymphopoietin receptor and the IL-7R alpha chain. After binding STAT5 phosphorylation is induced resulting in the expression of downstream transcription factors. Like IL-7, TSLP induces phosphorylation of STAT3 and STAT5, but uses kinases other than the JAKs for activation. TSLP has the functions of enhancing the maturation of CD11c+ dendritic cells and inducing allergic inflammation by directly activating mast cells. Its expression is linked to many disease states including asthma, inflammatory arthritis, atopic dermatitis, and eczema and other allergic states. But the factors inducing the activation of TSLP release are not clearly defined. TSLP-activated DCs have been shown to prime na ve T cells to produce the proallergic cytokines (IL-4, IL-5, IL-13, TNF-α) while down-regulating IL-10 and IFN-γ, suggesting a role in initiating allergic inflammation. Human TSLP shares approximately 43% a.a. sequence identity with mouse TSLP. Recombinant Human TSLP is a 15.1kDa protein consisting of 132 amino acid residues.

PRODUCT OVERVIEW

Molecular Weight	Approximately 15.1 kDa, a single non-glycosylated polypeptide chain containing 132 amino acids.
Accession	Q969D9 Tyr29-Gln159 with an N-terminal Met
A.A. Sequence	MYDFTNCDFEKIKAAYLSTISKDLITYMSGTKSTEFNNTVSCSNRPHCLTEIQSLTFNPTAGCASLAKEMFAMKTKAAL AIWCPGYSETQINATQAMKKRRKRKVTTNKCLEQVSQLQGLWRRFNRPLLKQQ
Purity	＞98% by SDS-PAGE or HPLC.
Biological Activity	Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using human IL-7Rα and human TSLP R co-transfected murine BaF3 pro-B cells is less than 0.3 ng/ml, corresponding to a specific activity of ≥ 3.3×10^6 IU/mg.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PB, with 150 mM NaCl, pH 7.4.
Appearance	Sterile filtered White lyophilized (freeze-dried) powder.
Endotoxin	< 0.1 EU/μg of rHuTSLP protein as determined by LAL method.
Reconstitution	Before use this product, please read the direction below carefully. This vial must be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.

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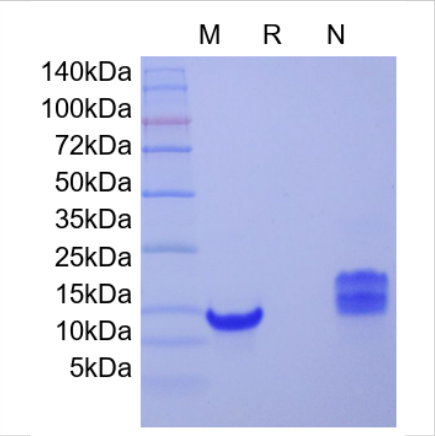

SDS-PAGE

STORAGE

For long term storage, the product should be stored ≤ -20°C. Please avoid repeated freeze-thaw cycles after reconstitution. 36 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.

NOTE

For Research Use Only. Not for diagnostic, therapeutics, prophylactic or in vivo use.