Datasheet

Cat. No. P1136

Recombinant Human TSLP

Information

Gene ID	85480
Accession #	Q969D9
Alternate Names	Thymic stromal lymphopoietin; TSLP
Source	*Escherichia coli.*
M.Wt	Approximately 15.1 kDa, a single non-glycosylated polypeptide chain containing 132 amino acids.
AA Sequence	MYDFTNCDFE KIKAAYLSTI SKDLITYMSG TKSTEFNNTV SCSNRPHCLT EIQSLTFNPT AGCASLAKEM FAMKTKAALA IWCPGYSETQ INATQAMKKR RKRKVTTNKC LEQVSQLQGL WRRFNRPLLK QQ
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
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.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 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.
Biological Activity	Fully biologically active when compared to standard. The ED_{50} 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.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10 μg	100 μg	500 μg
Recombinant Human TSLP	10 μg	100 μg	500 μg

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.

Quality Control

Purity	>98% by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuTSLP as determined by LAL method.

Description

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. It 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. Human TSLP shares approximately 43% a.a. sequence identity with mouse TSLP.

Reference

1. Osborn MJ, Ryan PL, Kirchhof N, et al. 2004. Blood, 103: 843-51.

2. Liu YJ, Soumelis V, Watanabe N, et al. 2007. Annu Rev Immunol, 25: 193-219.

3. Lu N, Wang YH, Arima K, et al. 2009. J Exp Med, 206: 2111-9.

4. Ziegler SF. 2010. Curr Opin Immunol, 22: 795-9.

5. Takai T. 2012. Allergol Int, 61: 3-17.

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