Recombinant Human TSLP

CATALOG #: 4896-20 20 µg
4896-1000 1 mg

LOT #: _____

SYNONYMS: Thymic Stromal Lymphopoietin, TSLP

SOURCE: *E. coli*

PURITY: > 97% by SDS-PAGE and RP-HPLC analyses
Endotoxin level is <0.1 ng/µg of human TSLP

MOLECULAR WT: 15 kDa

FORM: Lyophilized from sterile filtered 10 mM Na_2PO_4, pH 7.5.

RECONSTITUTION:
Centrifuge the vial prior to opening. Reconstitute in sterile dH_2O to a concentration of 0.1 mg/ml and let the lyophilized pellet dissolve completely. This solution can then be diluted into other aqueous buffers and stored at 4˚C for 1 week or –20˚C for future use.

STORAGE CONDITIONS:
The lyophilized human TSLP is best-stored desiccated below 0˚C. Reconstituted TSLP should be stored in working aliquots at -20˚C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

DESCRIPTION:
TSLP protein is a hemopoietic cytokine which signals throughout a heterodimeric receptor complex composed of the thymic stromal lymphopoietin receptor & the Interleukin-7 receptor alpha chain. TSLP impacts myeloid cells thus induces the discharge of T cell-attracting chemokines from monocytes & increases the growth of CD11c(+) dendritic cells. TSLP is mainly expressed in the heart, liver and prostate. TSLP is related in its biological activities with IL-7 and binds with the heterodimeric receptor complex consisting of the Interleukin-7 receptor alpha chain & the TSLPR. Similar to IL-7, TSLP enhances phosphorylation of STAT3 and STAT5, though uses kinases excluding JAKs for its activation. TSLP induces the release of T cell-attracting chemokines such asTARC & MDC from monocytes & triggers CD11c(+) dendritic cells. Recombinant human TSLP produced in E. Coli is a single, non-glycosylated polypeptide chain containing 132 amino acids and having a molecular mass of 15 kDa.

BIOLOGICAL ACTIVITY:
The ED_{50} determined by a cell proliferation assay using BF3 cells transiently expressing of human IL-7Ra & human TSLP-R was typically found to be 0.05 - 0.3 ng/ml.

AA SEQUENCE:
MYDFTNCDFEKIKAAYLSTISKDLITYMSGTKSTEFNNTVSCSNRPHCLTEIQSLTFNPTAGCASLA
KEMFAMKTKAALAIWCPGYSETQINATQAMKKRRKRKVTTNKCLEQVSQLQGLWRRFNRPLLKQ
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