

Human SLPI Protein (His Tag)

Catalog Number: 10343-H08B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

ALK1; ALP; BLPI; HUSI; HUSI-I; MPI; WAP4; WFDC4

Protein Construction:

A DNA sequence encoding the human SLPI (P03973)(Met1-Ala132) was expressed, with a C-terminal polyhistidine tag.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to inhibit trypsin cleavage of a fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK (Dnp)-NH₂ (Catalog # ES002). The IC₅₀ value is

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ser 26

Molecular Mass:

The secreted recombinant human SLPI consists of 117 amino acids and predicts a molecular mass of 13.1 KDa. The apparent molecular mass of the protein is approximately 15 KDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, 10% gly, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

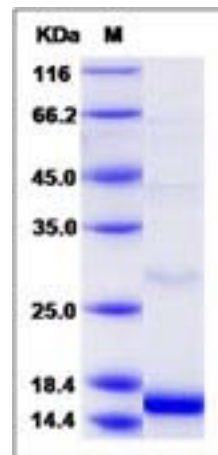
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Secretory leukoprotease inhibitor (SLPI), also called antileukoprotease (ALP), is a 12-kDa, nonglycosylated serine protease inhibitor present in mucous secretions. It is thought to play a role in protecting the mucosae from injury associated with inflammation. SLPI is locally produced by serous cells, including bronchial submucosal glands. Elafin and SLPI are members of larger families of proteins secreted predominantly at mucosal sites, and have been shown to be modulated in multiple pathological conditions. Elafin and SLPI are structurally related in that both have a fold with a four-disulfide core or whey acidic protein (WAP) domain responsible for inhibiting proteases. SLPI is a prominent innate immune protein of the respiratory tract, possessing serine protease inhibitor activity, antibacterial activity, and anti-inflammatory/immunomodulatory activity.

References

1. Moreau T, *et al.* (2008) Multifaceted roles of human elafin and secretory leukocyte proteinase inhibitor (SLPI), two serine protease inhibitors of the chelonianin family. *Biochimie.* 90(2): 284-95.
2. Weldon S, *et al.* (2007) Innate host defense functions of secretory leucoprotease inhibitor. *Exp Lung Res.* 33(10): 485-91.
3. Williams SE, *et al.* (2006) SLPI and elafin: one glove, many fingers. *Clin Sci (Lond).* 110(1): 21-35.

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