

SLPI (F-12): sc-373802

BACKGROUND

SLPI, secretory leukocyte protease inhibitor, is an enzyme that belongs to the α -1 antitrypsin antiprotein family. Produced by epithelial cells, SLPI resides in parotid secretions, bronchial, nasal and cervical mucus, and seminal fluid. SLPI plays a primary role in the regulation of neutrophil-mediated inflammation. It does so through proteolysis and subsequent inhibition of the leukocyte serine proteases, including the neutrophil and pancreatic proteases. The promoter region of SLPI has been identified as binding site for IRF-1, interferon regulatory factor. Expression of SLPI is inhibited by IRF-1 co-expression, identifying SLPI as a target of IRF-1 regulation. SLPI also functions as a macrophage derived inhibitor of macrophage response to LPS by inhibiting the production of nitric oxide, which suggests the role of SLPI in LPS tolerance.

REFERENCES

1. Thompson, R.C. and Ohlsson, K. 1986. Isolation, properties, and complete amino acid sequence of human secretory leukocyte inhibitor, a potent inhibitor of leukocyte elastase. *Proc. Natl. Acad. Sci. USA* 83: 6692-6696.
2. Nathan, C.F. and Hibbs, J.B., Jr. 1991. Role of nitric oxide synthesis in macrophage antimicrobial activity. *Curr. Opin. Immunol.* 3: 65-70.
3. Lee, C.H., et al. 1993. Distribution of secretory leukoprotease inhibitor in the human nasal airway. *Am. Rev. Respir. Dis.* 147: 710-716.

CHROMOSOMAL LOCATION

Genetic locus: SLPI (human) mapping to 20q13.12.

SOURCE

SLPI (F-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 63-92 within an internal region of SLPI of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SLPI (F-12) is available conjugated to agarose (sc-373802 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373802 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373802 PE), fluorescein (sc-373802 FITC), Alexa Fluor® 488 (sc-373802 AF488), Alexa Fluor® 546 (sc-373802 AF546), Alexa Fluor® 594 (sc-373802 AF594) or Alexa Fluor® 647 (sc-373802 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373802 AF680) or Alexa Fluor® 790 (sc-373802 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373802 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

SLPI (F-12) is recommended for detection of SLPI of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

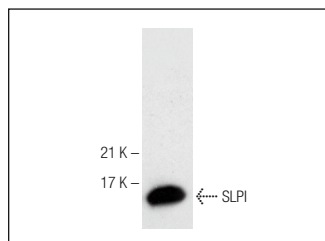
Suitable for use as control antibody for SLPI siRNA (h): sc-42977, SLPI shRNA Plasmid (h): sc-42977-SH and SLPI shRNA (h) Lentiviral Particles: sc-42977-V.

Molecular Weight of SLPI: 12 kDa.

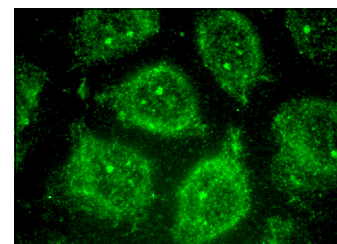
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SLPI (F-12): sc-373802. Western blot analysis of SLPI expression in human lung tissue extract.



SLPI (F-12): sc-373802. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Liu, C., et al. 2020. Fat-specific knockout of Meclp2 upregulates SLPI to reduce obesity by enhancing browning. *Diabetes* 69: 35-47.
2. Wei, Z., et al. 2020. Targeting secretory leukocyte protease inhibitor (SLPI) inhibits colorectal cancer cell growth, migration and invasion via down-regulation of Akt. *PeerJ* 8: e9400.
3. Li, M., et al. 2021. Time-resolved extracellular matrix atlas of the developing human skin dermis. *Front. Cell Dev. Biol.* 9: 783456.
4. Wei, X., et al. 2024. A human organoid drug screen identifies α 2-adrenergic receptor signaling as a therapeutic target for cartilage regeneration. *Cell Stem Cell* 27: S1934-5909(24)00315-1.

RESEARCH USE

For research use only, not for use in diagnostic procedures.