

## SLPI (31): sc-52728

### BACKGROUND

SLPI, secretory leukocyte protease inhibitor, is a 12 kDa enzyme that belongs to the  $\alpha$ -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 coexpression, 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., Igarashi, Y., Hohman, R.J., Kaulbach, H., White, M.V. and Kaliner, M.A. 1993. Distribution of secretory leukoprotease inhibitor in the human nasal airway. *Am. Rev. Respir. Dis.* 147: 710-716.
4. Jin F.Y., Nathan, C., Radzioch, D. and Ding, A. 1997. Secretory leukocyte protease inhibitor: A macrophage product induced by and antagonistic to bacterial lipopolysaccharide. *Cell* 88: 417-426.
5. Nguyen, H., Teskey, L., Lin, R. and Hiscott, J. 1999. Identification of the secretory leukocyte protease inhibitor (SLPI) as a target of IRF-1 regulation. *Oncogene* 18: 5455-5463.

### CHROMOSOMAL LOCATION

Genetic locus: SLPI (human) mapping to 20q12.

### SOURCE

SLPI (31) is a mouse monoclonal antibody raised against purified SLPI of human origin.

### PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### STORAGE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

### APPLICATIONS

SLPI (31) is recommended for detection of SLPI of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

Positive Controls: A549 cell lysate: sc-2413 or mouse lung extract: sc-2390.

### RESEARCH USE

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