

PLUNC (H-40): sc-134733

BACKGROUND

The upper respiratory tract is the main place of entry for pathogens to invade the body, and early recognition of bacterial products in this region is crucial for host defense. Palate lung nasal epithelial clone PLUNC (or LUNX) is an airway specific secretory protein that is expressed in epithelial tissues and submucosal glands of the oral cavity and upper respiratory tract of humans, mice, rats and cows. PLUNC binds to lipopolysaccharide (LPS) in nasal lavage fluid (NLF) which points to its role in the inflammatory response of the upper airways after exposure to irritants. Decreased levels of PLUNC occur in the NLF of smokers and people who have been exposed to reactive epoxy chemicals, indicating that long-term exposure to airway irritants impairs the production of PLUNC in the upper respiratory tract. Abnormal expression of PLUNC may influence susceptibility to nasopharyngeal carcinoma in the Chinese population.

REFERENCES

1. Bingle, C.D. and Craven, C.J. 2002. PLUNC: a novel family of candidate host defence proteins expressed in the upper airways and nasopharynx. *Hum. Mol. Genet.* 11: 937-943.
2. Ghafouri, B., et al. 2003. PLUNC (palate, lung and nasal epithelial clone) proteins in human nasal lavage fluid. *Biochem. Soc. Trans.* 31 (Pt. 4): 810-814.
3. Campos, M.A., et al. 2004. Purification and characterization of PLUNC from human tracheobronchial secretions. *Am. J. Respir. Cell Mol. Biol.* 30: 184-192.
4. Da Lee, R., et al. 2004. Differential gene profiles in developing embryo and fetus after in utero exposure to ethanol. *J. Toxicol. Environ. Health Part A* 67: 2073-2084.
5. Ghafouri, B., et al. 2004. PLUNC in human nasal lavage fluid: multiple isoforms that bind to lipopolysaccharide. *Biochim. Biophys. Acta* 1699: 57-63.
6. Casado, B., et al. 2005. Identification of human nasal mucous proteins using proteomics. *Proteomics* 5: 2949-2959.
7. Geetha, C., et al. 2005. Design and validation of anti-inflammatory peptides from human parotid secretory protein. *J. Dent. Res.* 84: 149-153.
8. Larsen, K., et al. 2005. Porcine SPLUNC1: molecular cloning, characterization and expression analysis. *Biochim. Biophys. Acta* 1727: 220-226.

CHROMOSOMAL LOCATION

Genetic locus: PLUNC (human) mapping to 20q11.21.

SOURCE

PLUNC (H-40) is a rabbit polyclonal antibody raised against amino acids 21-60 mapping near the N-terminus of PLUNC of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PLUNC (H-40) is recommended for detection of PLUNC of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 PLUNC siRNA (h): sc-39299, PLUNC shRNA Plasmid (h): sc-39299-SH and PLUNC shRNA (h) Lentiviral Particles: sc-39299-V.

Molecular Weight of PLUNC: 25 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.