

# PLUNC (Q-16): sc-49248

## 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: 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* 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.
9. Kim, CH., et al. 2006. Expression and regulation of PLUNC in human nasal epithelium. *Acta Otolaryngol.* 126: 1073-1078.

## CHROMOSOMAL LOCATION

Genetic locus: PLUNC (human) mapping to 20q11.2; Plunc (mouse) mapping to 2 H1.

## SOURCE

PLUNC (Q-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PLUNC of human origin.

## RESEARCH USE

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

## PRODUCT

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

Blocking peptide available for competition studies, sc-49248 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PLUNC (Q-16) is recommended for detection of PLUNC of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); may cross-react with OR10J1.

Suitable for use as control antibody for PLUNC siRNA (h): sc-39299 and PLUNC siRNA (m): sc-61368.

Molecular Weight of PLUNC: 25 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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) or our catalog for detailed protocols and support products.