

# Napsin A (Y-19): sc-50125

## BACKGROUND

Napsin A is an aspartic proteinase that belongs to the peptidase A1 family and plays a role in pneumocyte surfactant processing. It is a 420 amino acid polypeptide consisting of a 24 residue signal peptide, a 40 amino acid propeptide, the mature enzyme of 336 amino acids and a C-terminal extension of 18 residues. The mature Napsin A protein contains three predicted disulfide bonds, three potential N-linked oligosaccharide attachment sites, an RGD motif and a recognition motif for integrin binding, in the C terminus, immediately before a four amino acid insert that is unique to aspartic proteinases. Highest levels of Napsin A have been detected in adult lung (type II pneumocytes), fetal lung and kidney tissues. Napsin A is also expressed at lower levels in adult spleen and at very low levels in peripheral blood leukocytes. Human Napsin A shares 72.6% sequence identity with the mouse homolog.

## REFERENCES

1. Tatnell, P.J., et al. 1999. Napsins: new human aspartic proteinases. Distinction between two closely related genes. *FEBS Lett.* 441: 43-48.
2. Chuman, Y., et al. 1999. Napsin A, a member of the aspartic protease family, is abundantly expressed in normal lung and kidney tissue and is expressed in lung adenocarcinomas. *FEBS Lett.* 462: 129-134.

## CHROMOSOMAL LOCATION

Genetic locus: NAPSA (human) mapping to 19q13.33.

## SOURCE

Napsin A (Y-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Napsin A of human origin.

## 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-50125 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

Napsin A (Y-19) is recommended for detection of Napsin A 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).

Napsin A (Y-19) is also recommended for detection of Napsin A in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Napsin A siRNA (h): sc-61152, Napsin A shRNA Plasmid (h): sc-61152-SH and Napsin A shRNA (h) Lentiviral Particles: sc-61152-V.

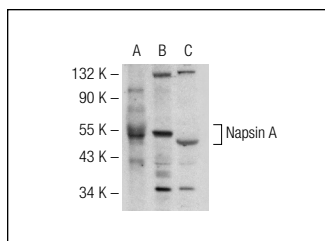
Molecular Weight of Napsin A: 50 kDa.

Positive Controls: mouse lung extract: sc-2390, mouse liver extract: sc-2256 or mouse pancreas extract: sc-364244.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



Napsin A (Y-19): sc-50125. Western blot analysis of Napsin A expression in mouse lung (A), mouse liver (B) and mouse pancreas (C) tissue extracts.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

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

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Try **Napsin A (10C4B8): sc-517223**, our highly recommended monoclonal alternative to Napsin A (Y-19).