

Napsin A (10C4B8): sc-517223

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 3 predicted disulfide bonds, 3 potential N-linked oligosaccharide attachment sites, an RGD motif, a recognition motif for integrin binding, in the C terminus, immediately before a 4-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.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605631. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Higashiyama, M., et al. 2004. Surgical treatment of bone metastasis followed by a primary lung cancer lesion: report of a case. *Surg. Today* 34: 600-605.
5. Inamura, K., et al. 2005. Pulmonary adenocarcinomas with enteric differentiation: histologic and immunohistochemical characteristics compared with metastatic colorectal cancers and usual pulmonary adenocarcinomas. *Am. J. Surg. Pathol.* 29: 660-665.

CHROMOSOMAL LOCATION

Genetic locus: NAPSA (human) mapping to 19q13.33; Napsa (mouse) mapping to 7 B4.

SOURCE

Napsin A (10C4B8) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 20-158 of Napsin A of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml 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.

APPLICATIONS

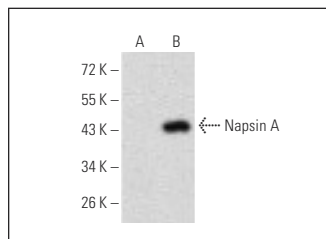
Napsin A (10C4B8) is recommended for detection of Napsin A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 Napsin A siRNA (h): sc-61152, Napsin A siRNA (m): sc-61153, Napsin A shRNA Plasmid (h): sc-61152-SH, Napsin A shRNA Plasmid (m): sc-61153-SH, Napsin A shRNA (h) Lentiviral Particles: sc-61152-V and Napsin A shRNA (m) Lentiviral Particles: sc-61153-V.

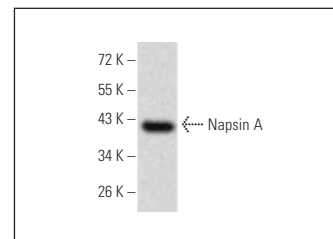
Molecular Weight of Napsin A: 50 kDa.

Positive Controls: human Napsin A (20-158)-hlgGfc transfected HEK293 whole cell lysate.

DATA



Napsin A (10C4B8): sc-517223. Western blot analysis of Napsin A expression in non-transfected (A) and human Napsin A (20-158)-hlgGfc transfected (B) HEK293 whole cell lysates.



Napsin A (10C4B8): sc-517223. Western blot analysis of Napsin A expression in human Napsin A recombinant protein.

RESEARCH USE

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

PROTOCOLS

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