abcam

ab73021

Anti-NAPSIN A antibody [KCG1.1]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.3 - 7.5 Preservative: 0.05% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human NAPSA. The exact immunogen used to generate this antibody is proprietary information. Database link O96009
Clone number	KCG1.1
Purification technique	Affinity purification Protein A
Specificity	Napsin A reactivity was determined immunohistochemically on formalin-fixed paraffin-embedded cell blocks from 50 pleural effusion (5 mesotheliomas, 10 mesothelial proliferations, 12 pulmonary, and 23 nonpulmonary metastases). Napsin A was positive in 10/12 pulmonary adenocarcinomas. The specificity of this antibody for primary lung adenocarcinoma is 47 out of 58 (81%), primary lesions were positive.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/50 - 1/100

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	30 minutes at room temperature in an ABC method.Formalin-fixed paraffin-embedded tissue sections require high temperature antigen unmasking with 10 mM citrate buffer, pH 6.0 prior to immunostaining

Target data

See full target information NAPSA

Function	May be involved in processing of pneumocyte surfactant precursors.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Napsin A also known as napsin or napsine is an aspartic proteinase with a molecular weight of approximately 38 kDa. This enzyme is primarily expressed in the lung tissue renal tubules and in some cases thymus and spleen. Napsin A plays a significant role in protein catabolism by degrading specific peptide bonds facilitating protein turnover and maintenance of cellular homeostasis. It is often

	useful in identifying cell types being napsin A positive in certain cells and napsin A negative in others.
Biological function summary	Napsin A functions in the maturation of pulmonary surfactant proteins which are essential for normal lung function. Napsin A cleaves surfactant protein B an important component of the surfactant system in alveolar air spaces allowing proper lung mechanics. While napsin A operates in concert with other enzymes it does not form part of a larger complex. Its role impacts cellular processes related to respiratory physiology and contributes to the regulation of protein breakdown within the cell.
Pathways	Napsin A is involved in respiratory and proteolytic pathways influencing lung physiology and systemic protein metabolism. One important pathway is the surfactant metabolism pathway which ensures adequate surfactant levels for maintaining lung function. Napsin A is related to surfactant proteins like surfactant protein B through this pathway facilitating their activation and processing.
Associated diseases and disorders	Napsin A serves as a biomarker for certain lung adenocarcinomas where napsin A positive lung tumors often indicate differential diagnosis between primary lung cancer and metastases from other sites. Napsin A's expression is linked to the presence of adenocarcinoma a specific type of lung cancer. In renal disorders napsin A expression helps distinguish renal cell carcinoma from other renal masses where its expression pattern relates to other proteins like thyroid transcription factor-1 in diagnosing specific cancer types.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

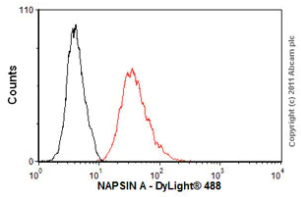
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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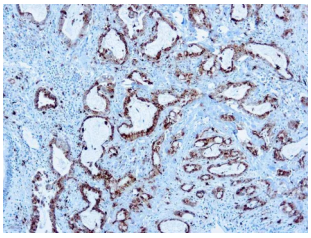
2 product images



Flow Cytometry - Anti-NAPSIN A antibody [KCG1.1] (ab73021)

NAPSIN A Flow Cytometry staining using mouse Anti-NAPSIN A antibody

Overlay histogram showing A549 cells stained with ab73021 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab73021, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in A549 cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-NAPSIN A antibody [KCG1.1] (ab73021)

Paraffin embedded mouse lung adenocarcinoma tissue stained for Napsin A using ab73021 in immunohistochemical analysis.

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