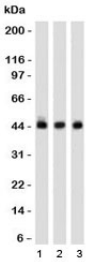
Napsin A Antibody / Surfactant Processing Enzyme Antibody [clone NPSNA-1] (V7177)

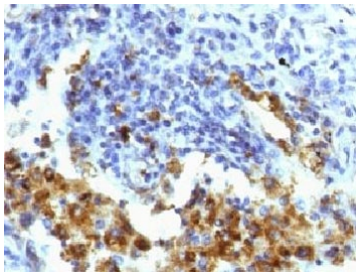
Catalog No.	Formulation	Size
V7177-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7177-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7177SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7177IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	NPSNA-1
Purity	Protein G affinity chromatography
UniProt	O96009
Localization	Cytoplasmic
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT Prediluted IHC Only Format : incubate for 30 min at RT (1)
Limitations	This Napsin A Antibody / Surfactant Processing Enzyme Antibody is available for research use only.



Napsin A Antibody for WB. Western blot analysis of Napsin A (NAPSA) expression in human cell lysates demonstrates a band at approximately 38-45 kDa in Lane 1: K562, Lane 2: HEK293, and Lane 3: A549, consistent with the predicted molecular weight of this glycosylated lysosomal aspartic protease. Clone NPSNA-1 detects Napsin A with a defined band corresponding to processed protein species, reflecting its role in surfactant protein maturation and epithelial enzyme function.



Napsin A Antibody for IHC. Immunohistochemistry analysis of Napsin A (NAPSA) expression in FFPE human lung adenocarcinoma demonstrates strong granular cytoplasmic HRP-DAB brown staining in tumor epithelial cells with minimal background in surrounding stromal regions. Clone NPSNA-1 highlights Napsin A expression consistent with its role in surfactant protein processing in alveolar epithelial cells, supporting identification of enzyme-associated epithelial differentiation within tumor tissue. HIER was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 minutes followed by cooling at RT for 20 minutes prior to staining.

Description

Napsin A (NAPSA) is a lysosomal aspartic protease expressed primarily in lung alveolar epithelial cells, where it plays a key role in the processing of surfactant-associated proteins within secretory pathways. Napsin A Antibody / Surfactant Processing Enzyme Antibody is designed to detect Napsin A in studies focused on enzyme function and surfactant protein maturation in pulmonary epithelial cells. Napsin A antibody, also referred to as NAPSA antibody, is widely used in investigations of lung physiology and epithelial cell function.

Napsin A contributes directly to the maturation of surfactant protein B in type II pneumocytes, a critical process required for maintaining alveolar stability and proper respiratory function. This enzymatic activity links Napsin A to essential physiological processes within the lung and highlights its importance in maintaining epithelial cell function and tissue homeostasis. Its localization within lysosomal and secretory compartments reflects its role in intracellular protein processing and enzymatic activity.

This Napsin A Antibody / Surfactant Processing Enzyme Antibody utilizes clone NPSNA-1, a mouse monoclonal antibody designed to detect Napsin A with consistent performance in studies of enzyme activity and protein processing. Its use supports investigation of surfactant-related pathways and enables analysis of enzyme function in epithelial cell systems.

Detection of Napsin A using this antibody reveals cytoplasmic expression patterns associated with surfactant protein processing and vesicular localization in alveolar epithelial cells. This provides insight into the relationship between enzyme activity, intracellular protein handling, and functional output in lung tissue.

In disease contexts, Napsin A expression is frequently retained in lung adenocarcinoma and reflects differentiation toward alveolar epithelial lineage. As a surfactant processing enzyme marker, its detection provides insight into tumor biology and functional characteristics of tumor cells derived from pulmonary epithelium, particularly in relation to retained epithelial function.

Beyond its role in disease, Napsin A is an important marker for studying normal lung physiology and the biochemical pathways underlying surfactant production. Its enzymatic function provides a direct link between molecular expression and physiological outcome, supporting studies of respiratory biology and epithelial cell specialization.

Overall, Napsin A antibody reagents used as surfactant processing enzyme antibodies provide reliable detection of Napsin A, supporting detailed investigation of enzyme function, lung physiology, and epithelial biology with strong functional relevance.

This antibody is part of a comprehensive NAPSA antibody collection developed to support Napsin A detection across IHC, WB, IF, and FACS applications in lung cancer and epithelial biology research.

Application Notes

Titering of the Napsin A Antibody / Surfactant Processing Enzyme Antibody may be required for optimal performance.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Amino acids 189-299 from the human protein were used as the immunogen for the Napsin A antibody.

Storage

Store the Napsin A antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

NAPSA antibody, Napsin A surfactant enzyme antibody, Surfactant protein processing antibody, Lung enzyme antibody