abcam

ab181169

Anti-NASP antibody [EPR12827]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR12827
Purification technique	Affinity purification Protein A
Concentration	0.061 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/40 - 1/60
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/40
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information NASP

Function Component of the histone chaperone network (PubMed:22195965). Binds and stabilizes histone H3-H4 not bound to chromatin to maintain a soluble reservoir and modulate degradation by chaperone-mediated autophagy (PubMed:22195965). Required for DNA replication, normal cell cycle progression and cell proliferation. Forms a cytoplasmic complex with HSP90 and H1 linker histones and stimulates HSP90 ATPase activity. NASP and H1 histone are subsequently released from the complex and translocate to the nucleus where the histone is released for binding to DNA. Isoform 1. Stabilizes soluble histone H3-H4. Isoform 2. Stabilizes soluble histone H3-H4.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	NASP also known as Nuclear Autoantigenic Sperm Protein functions as a histone chaperone. With a molecular mass of approximately 75 kDa NASP assists in the proper assembly and disassembly of nucleosome structures by binding to histones H1 and H2A-H2B. This protein mainly expresses in rapidly dividing tissues especially in the testes but also presents in the thymus and bone marrow. NASP maintains the supply of free histones aiding in DNA replication and transcription processes.
Biological function summary	NASP plays an essential role in chromatin organization and dynamics during the cell cycle. As part of the histone transport complex it stabilizes histones and prevents their aggregation. NASP facilitates proper chromatin assembly necessary for DNA packaging and regulation of gene expression. This activity ensures the accurate transmission of genetic information during cell division impacting processes essential for cell proliferation and function.
Pathways	NASP operates within the chromatin assembly and nucleosome remodeling pathways. It coordinates with other chaperones like NAP1 in chromatin assembly factor-1 (CAF-1) complex. These pathways are integral to DNA replication and repair directly linking NASP to cellular processes critical for maintaining genome integrity. The interaction with importin beta further indicates NASP's role in nuclear import pathways emphasizing its involvement in both nuclear organization and cellular regulation.
Associated diseases and disorders	NASP associates with cancer and infertility. The aberrant expression of NASP is observed in various tumors implying its contribution to tumorigenesis and proliferation. Its association with other histone chaperones such as ASF1 highlights its potential role in oncogenic pathways. Furthermore alterations in NASP expression affect sperm development linking it to male infertility and emphasizing its necessity in reproductive biology.

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.

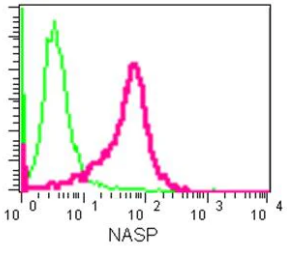
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

Full details and terms and conditions can be found here:
Terms & Conditions.

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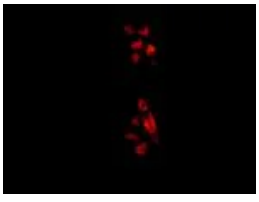
4 product images



Flow Cytometry (Intracellular) - Anti-NASP antibody [EPR12827] (ab181169)

NASP Flow Cytometry (Intracellular) staining using rabbit Anti-NASP antibody

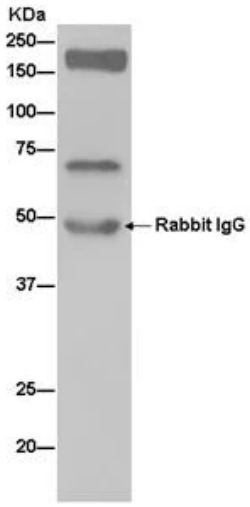
Intracellular Flow Cytometry analysis of HeLa cells using ab181169at a 1/40 dilution (red) or aRabbit monoclonal IgG (negative) (green). Goat anti rabbit IgG (FITC) secondary usedat a 1/40 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-NASP antibody [EPR12827] (ab181169)

NASP Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NASP antibody

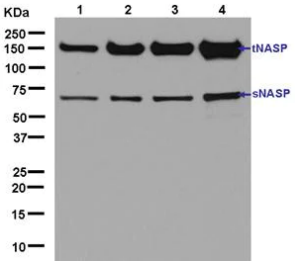
Immunofluorescence analysis of 293 cells (fixative 4% paraformaldehyde) labeling NASP with ab181169 at a 1/250 dilution.Goat anti rabbit IgG (Alexa Fluor® 555) secondary used at a 1/200 diution.



Immunoprecipitation - Anti-NASP antibody [EPR12827] (ab181169)

Detection of Human NASP by Western Blot of Immunoprecipitate. Caco2 whole cell lysate loaded, ab181169 immunoprecipitated NASP at a 1/50 dilution. Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated secondary used at a 1/1000 dilution.
All lanes:
Immunoprecipitation - Anti-NASP antibody [EPR12827] (ab181169)

Predicted band size: 85 kDa



Western blot - Anti-NASP antibody [EPR12827] (ab181169)

160KDa: tNASP
62KDa: sNASP
All lanes:
Western blot - Anti-NASP antibody [EPR12827] (ab181169) at 1/10000 dilution

Lane 1:
HeLa cell lysate at 20 µg

Lane 2:
Caco-2 cell lysate at 20 µg

Lane 3:
293 cell lysate at 20 µg

Lane 4:
NTERA2/D1 cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 85 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.