abcam

ab313343

Anti-Influenza A Virus Nucleoprotein antibody [EPR28253-17]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 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	EPR28253-17
Purification technique	Affinity purification Protein A
Concentration	0.499 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Influenza A
Dilution info	1/1000
Notes	-

Species	Transfected cell lysate - Influenza A
Dilution info	1/1000
Notes	-

Not recommended

Species	Transfected cell line - Influenza A, Recombinant fragment - Influenza A
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Influenza A
Dilution info	1/250
Notes	-

Species	Transfected cell line - Influenza A
Dilution info	1/250
Notes	-

Not recommended

Species	Transfected cell lysate - Influenza A, Recombinant fragment - Influenza A
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Influenza A
Dilution info	1/500
Notes	-

Species	Transfected cell line - Influenza A
Dilution info	1/500
Notes	-

Not recommended

Species	Transfected cell lysate - Influenza A, Recombinant fragment - Influenza A
Dilution info	-
Notes	-

I-ELISA

Tested

Species	Recombinant fragment - Influenza A
Dilution info	1000 ng/mL
Notes	Use at 125 ng/ml

Expected

Species	Influenza A
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Transfected cell lysate - Influenza A, Transfected cell line - Influenza A
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Influenza A, Transfected cell lysate - Influenza A, Transfected cell line - Influenza A, Recombinant fragment - Influenza A

Dilution info	-
Notes	-

Target data

See full target information NP

Function	Encapsidates the negative strand viral RNA, protecting it from nucleases. The encapsidated genomic RNA is termed the ribonucleoprotein (RNP) and serves as template for transcription and replication. The RNP needs to be localized in the host nucleus to start an infectious cycle, but is too large to diffuse through the nuclear pore complex. NP comprises at least 2 nuclear localization signals that are responsible for the active RNP import into the nucleus through cellular importin alpha/beta pathway. Later in the infection, nclear export of RNPs are mediated through viral proteins NEP interacting with M1 which binds nucleoproteins. It is possible that nucleoprotein binds directly host exportin-1/XPO1 and plays an active role in RNPs nuclear export. M1 interaction with RNP seems to hide nucleoprotein's nuclear localization signals. Soon after a virion infects a new cell, M1 dissociates from the RNP under acidification of the virion driven by M2 protein. Dissociation of M1 from RNP unmasks nucleoprotein's nuclear localization signals, targeting the RNP to the nucleus.

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	The Influenza A Virus Nucleoprotein also known as NP or nucleoprotein influenza A plays a significant mechanical role in the virus life cycle. It is an essential structural component that encapsidates viral RNA forming ribonucleoprotein complexes important for replication and transcription. Influenza A nucleoprotein has a molecular weight of approximately 56 kDa and is expressed in infected host cells. Within the influenza virion the nucleoprotein interacts with the viral RNA and polymerase complex ensuring the integrity and functionality of the viral genome.
Biological function summary	The influenza A nucleoprotein is involved in regulating viral RNA synthesis and acts as a platform for the assembly of viral components. It does not directly form stable complexes with host proteins but it is central to the ribonucleoprotein complexes that are vital for the virus life cycle. This nucleoprotein assists in the virus's ability to hijack the host cellular machinery favoring its replication and infection processes. While the nucleoprotein itself does not form direct complexes with host proteins its interactions are significant for facilitating various stages of the viral life cycle.
Pathways	The influenza A nucleoprotein operates within the viral replication and transcription pathways. It associates with proteins such as PB1 PB2 and PA of the polymerase complex which is important for viral RNA synthesis. The nucleoprotein ensures the proper packaging of the viral genome to be recognized by the polymerase complex playing a pivotal role in the viral replication process. Through these pathways it indirectly impacts the host immune response as the virus must evade host defenses to ensure replication success.
Associated diseases and disorders	The nucleoprotein influenza A is primarily linked to influenza infections a major respiratory illness. Influenza can manifest in a mild to severe form occasionally leading to pandemics. The nucleoprotein is an attractive target for antiviral drug development given its essential role in the viral life cycle. Moreover studies have shown that variations and mutations in the nucleoprotein can affect viral virulence and the outcome of infection. By understanding its mechanisms and interactions with other viral proteins like HA and NA researchers can better develop strategies to combat influenza outbreaks.

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

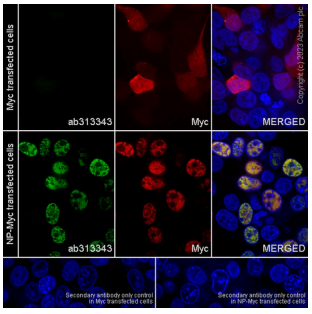
We do not recommend this combination. It is not covered by our product promise.

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.

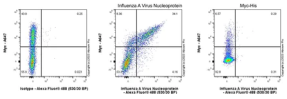
Full details and terms and conditions can be found here:
Terms & Conditions.

4 product images



Immunocytochemistry/ Immunofluorescence - Anti-Influenza A Virus Nucleoprotein antibody [EPR28253-17] (ab313343)

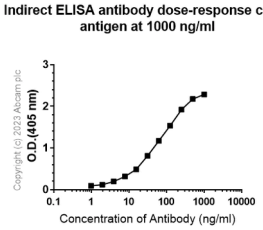
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized 293T (Human embryonic kidney epithelial cell) cells labelling Influenza A Virus Nucleoprotein with ab313343 at 1/250 (2.06 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2ug/ml dilution (Green). Confocal image showing positive staining in 293T cells transfected with an Influenza A Virus Nucleoprotein expression vector containing a myc tag. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). Myc-Tag Mouse mAb (Alexa Fluor® 647) was used to counterstain tubulin at 1/100 0.38ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2ug/ml dilution.



Flow Cytometry (Intracellular) - Anti-Influenza A Virus Nucleoprotein antibody [EPR28253-17] (ab313343)

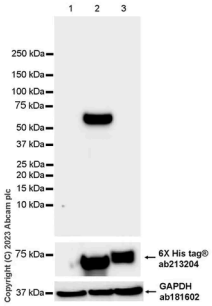
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Isotype (Left) / 293T cells transfected with a Influenza A Virus Nucleoprotein expression vector containing a myc tag (Middle) / 293T cells transfected with a empty expression vector containing a myc tag (Right) cells labelling Influenza A Virus Nucleoprotein with ab313343 at 1/500 dilution (0.1 ug)/Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody)

(Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Indirect ELISA - Anti-Influenza A Virus Nucleoprotein antibody [EPR28253-17] (ab313343)

Indirect ELISA analysis of ab313343 at 1000-0 ng/ml. The Secondary antibody used was Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) at 1:2500 dilution. Antigen: Influenza A Virus Nucleoprotein. Antigen concentration: 1000 ng/ml



Western blot - Anti-Influenza A Virus Nucleoprotein antibody [EPR28253-17] (ab313343)

Blocking and diluting buffer and concentration: 5% NFDM/TBST In Western blot, anti-His antibody (ab213204) staining at 1/5000 dilution. Anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution. Exposure time: 15 seconds
All lanes:
Western blot - Anti-Influenza A Virus Nucleoprotein antibody [EPR28253-17] (ab313343) at 1/1000 dilution

Lane 1:
293T cells transfected with an empty vector containi a His tag whole cell lysate at 20 µg

Lane 2:
293T transfected with an Influenza A Virus Nucleoprotein expression vector containi a His tag whole cell lysate at 20 µg

Lane 3:
293T transfected with an Influenza B Virus Nucleoprotein expression vector containi a His tag whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 56 kDa

Exposure time: 15s

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