abcam

ab313745

Anti-Influenza A Virus PA protein antibody [EPR28250-39]

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	EPR28250-39
Purification technique	Affinity purification Protein A
Concentration	0.508 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

I-ELISA

Tested

Species	Recombinant fragment - Influenza A
Dilution info	1000 ng/mL
Notes	-

Predicted

Species	Influenza A
Dilution info	-
Notes	-

Not recommended

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

WB

Tested

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

Predicted

Species	Influenza A
Dilution info	-
Notes	-

Not recommended

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

IHC-P

Tested

Species	Transfected cell line - Influenza A
Dilution info	1/2000
Notes	-

Predicted

Species	Influenza A
Dilution info	-
Notes	-

Not recommended

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

ICC/IF

Tested

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

Predicted

Species	Influenza A
Dilution info	-
Notes	-

Not recommended

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

Flow Cyt (Intra)

Tested

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

Predicted

Species	Influenza A
Dilution info	-
Notes	-

Not recommended

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

IP

Tested

Species	Transfected cell lysate - Influenza A
Dilution info	1/30
Notes	-

Predicted

Species	Influenza A
Dilution info	-
Notes	-

Not recommended

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

Dilution info	-
Notes	-

Target data

See full target information PA

Function	Plays an essential role in viral RNA transcription and replication by forming the heterotrimeric polymerase complex together with PB1 and PB2 subunits. The complex transcribes viral mRNAs by using a unique mechanism called cap-snatching. It consists in the hijacking and cleavage of host capped pre-mRNAs. These short capped RNAs are then used as primers for viral mRNAs. The PB2 subunit is responsible for the binding of the 5' cap of cellular pre-mRNAs which are subsequently cleaved after 10-13 nucleotides by the PA subunit that carries the endonuclease activity.

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 PA protein also known simply as PA protein plays an important mechanical role in the viral replication process. It acts as a component of the RNA polymerase complex within the Influenza A virus. This protein has a molecular mass of approximately 85 kDa. PA is expressed in infected host cells and contributes significantly to viral RNA synthesis by possessing endonuclease activity which is important for the cleavage of host mRNA during viral transcription.
Biological function summary	This protein is part of the viral RNA polymerase complex along with PB1 and PB2 proteins. This complex functions as an essential machinery for the transcription and replication of the viral RNA genome enabling the virus to use host cellular machinery for its proliferation. PA protein interacts specifically with the PB1 protein assisting in the polymerase assembly and activity which marks it as an important element in the life cycle of the virus.
Pathways	The PA protein is involved primarily in the influenza viral RNA synthesis pathway. The polymerase complex which includes PA drives this pathway by transcribing viral RNA into mRNA and replicating the viral genome. The PA protein also interacts with the host's nuclear pathways as influenza replication occurs in the host cell nucleus. Its interaction with PB1 and PB2 proteins is central to these pathways facilitating the initiation and elongation phases of RNA synthesis.
Associated diseases and disorders	The PA protein relates directly to influenza infections in humans which can manifest as seasonal flu outbreaks or pandemic events. Its role in the replication of Influenza A makes it a potential target for antiviral drug development. Compounds that inhibit the endonuclease activity of PA protein aim to impair viral growth and spread. The PA protein's interaction with other viral proteins like PB1 highlights its involvement in the pathogenesis of influenza and highlights its importance in the disease life cycle.

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.

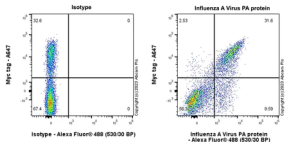
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

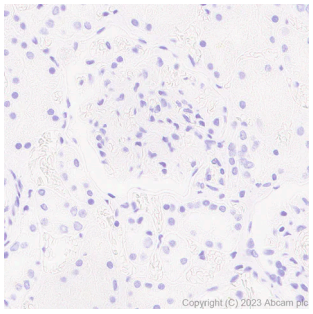
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9 product images



Flow Cytometry (Intracellular) - Anti-Influenza A Virus PA protein antibody [EPR28250-39] (ab313745)

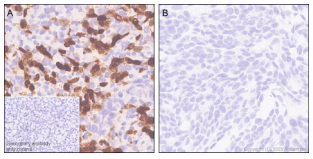
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized 293T cells (human embryonic kidney epithelial cell) transfected with a Influenza A Virus PA protein expression vector containing a Myc-His tag cells labelling Influenza A Virus PA protein with ab313745 at 1/500 dilution (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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Influenza A Virus PA protein antibody [EPR28250-39] (ab313745)

Influenza A Virus PA protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human kidney using rabbit Anti-Influenza A Virus PA protein antibody

Immunohistochemical analysis of paraffin-embedded human kidney tissue labeling Influenza A Virus PA protein with ab313745 at 1/2000 (0.254 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: No staining on human kidney. The section was incubated with ab313745 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.

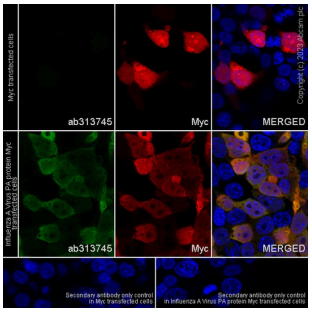


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Influenza A Virus PA protein antibody [EPR28250-39] (ab313745)

Influenza A Virus PA protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Influenza A Virus PA protein antibody

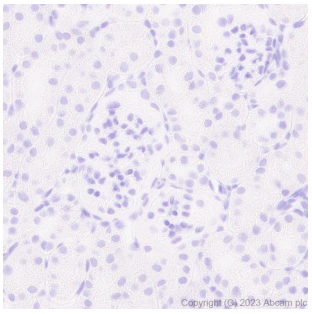
Immunohistochemical analysis of paraffin-embedded Panel A HEK-293T tissue labeling Influenza A Virus PA protein with ab313745 at 1/2000 (0.254 ug/ml) followed by a ready to use LeicaDS9800

(Bond™ Polymer Refine Detection). Cytoplasmic staining on (A) HEK-293T transfected with a Influenza A Virus PA protein expression vector and no staining on (B) HEK-293T transfected with empty vector. The section was incubated with ab313745 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-Influenza A Virus PA protein antibody [EPR28250-39] (ab313745)

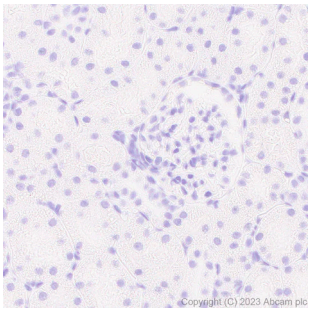
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized 293T (human embryonic kidney epithelial cell) cells labelling Influenza A Virus PA protein with ab313745 at 1/500 (1.016 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/mL dilution (Green). Confocal image showing positive staining in 293T cells transfected with a Influenza A Virus PA protein expression vector containing a myc tag. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab223894 Anti-Myc tag mouse monoclonal antibody (Alexa Fluor® 594) was used to counterstain tubulin at 1/100 5ug/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 2 ug/mL dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Influenza A Virus PA protein antibody [EPR28250-39] (ab313745)

Influenza A Virus PA protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse kidney using rabbit Anti-Influenza A Virus PA protein antibody

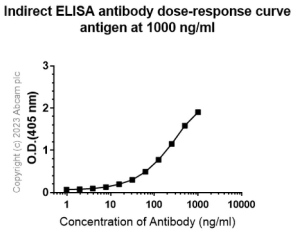
Immunohistochemical analysis of paraffin-embedded mouse kidney tissue labeling Influenza A Virus PA protein with ab313745 at 1/2000 (0.254 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: No staining on mouse kidney. The section was incubated with ab313745 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Influenza A Virus PA protein antibody [EPR28250-39] (ab313745)

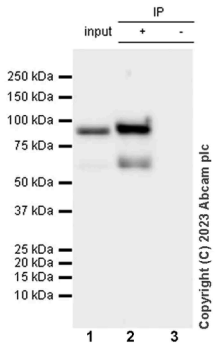
Influenza A Virus PA protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat kidney using rabbit Anti-Influenza A Virus PA protein antibody

Immunohistochemical analysis of paraffin-embedded rat kidney tissue labeling Influenza A Virus PA protein with ab313745 at 1/2000 (0.254 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: No staining on rat kidney. The section was incubated with ab313745 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Indirect ELISA - Anti-Influenza A Virus PA protein antibody [EPR28250-39] (ab313745)

Indirect ELISA analysis of ab313745 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 PA protein.
Antigen concentration: 1000 ng/ml



Immunoprecipitation - Anti-Influenza A Virus PA protein antibody [EPR28250-39] (ab313745)

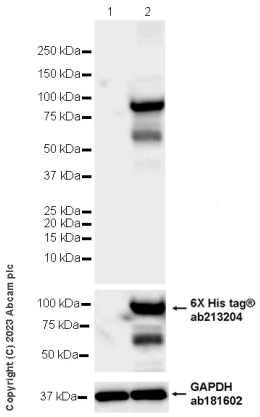
Influenza A Virus PA protein was immunoprecipitated from 0.35 mg 293T (human embryonic kidney epithelial cell) cells transfected with a Influenza A Virus PA protein expression vector containing a His-tag whole cell lysate with ab313745 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab313745 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution. Lane 1: 293T (human embryonic kidney epithelial cell) cells transfected with a Influenza A Virus PA protein expression vector containing a His-tag whole cell lysate Lane 2: 293T (human embryonic kidney epithelial cell) cells transfected with a Influenza A Virus PA protein expression vector containing a His-tag whole cell lysate Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab313745 in 293T whole cell lysate Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 5 seconds
All lanes:
Immunoprecipitation - Anti-Influenza A Virus PA protein antibody [EPR28250-39] (ab313745) at 1/30 dilution

All lanes:
293T (human embryonic kidney epithelial cell) cells transfected with a Influenza A Virus PA protein expression vector containing a His-tag whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 5s



Western blot - Anti-Influenza A Virus PA protein antibody [EPR28250-39] (ab313745)

Blocking and diluting buffer and concentration: 5% NFDM/TBST The lower MW band at approximately 65kDa is expected to be a degradation product. In Western blot, anti-His antibody (ab213204) staining at 1/5000 dilution. In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution. Exposure time: 5.5 seconds
All lanes:
Western blot - Anti-Influenza A Virus PA protein antibody [EPR28250-39] (ab313745) at 1/1000 dilution

Lane 1:
293T (human embryonic kidney epithelial cell) cells transfected with an empty vector containing a His-tag whole cell lysate at 20 µg

Lane 2:
293T cells transfected with a Influenza A Virus PA protein expression vector containing 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: 83 kDa

Exposure time: 5.5s

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