abcam

ab312856

Anti-Influenza A Virus PB2 protein antibody [EPR28249-46]

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	EPR28249-46
Purification technique	Affinity purification Protein A
Concentration	0.513 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	-

IHC-P

Tested

Species	Influenza A
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Transfected cell line - Influenza A
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

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	-

ICC/IF

Tested

Species	Influenza A
Dilution info	1/1000
Notes	-

Species	Transfected cell line - Influenza A
Dilution info	1/1000
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	-

Target data

See full target information PB2

Function	Plays an essential role in transcription initiation and cap-stealing mechanism, in which cellular capped pre-mRNAs are used to generate primers for viral transcription. Recognizes and binds the 7-methylguanosine-containing cap of the target pre-RNA which is subsequently cleaved after 10-13 nucleotides by the viral protein PA. Plays a role in the initiation of the viral genome replication and modulates the activity of the ribonucleoprotein (RNP) complex. In addition, participates in the inhibition of type I interferon induction through interaction with and inhibition of the host mitochondrial antiviral signaling protein MAVS.

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	Influenza A Polymerase basic protein 2 also known as PB2 protein plays an important mechanical role in the viral RNA polymerase complex which is necessary for viral replication. This protein has a molecular mass of approximately 87 kDa. PB2 is expressed within infected host cells and is a component of the influenza A virus polymerase complex along with PA and PB1 proteins. The PB2 target is essential for the transcription and replication phase in the viral lifecycle allowing the virus to hijack the host cell machinery for viral propagation.
Biological function summary	PB2 protein is part of the heterotrimeric RNA polymerase complex which is critical for the influenza virus's ability to replicate. The polymerase complex includes PA PB1 and PB2 proteins where PB2 protein plays a role in cap-snatching a mechanism to steal host mRNA caps for viral mRNA synthesis. This enables the influenza virus to synthesize its own proteins in the host cytoplasm facilitating efficient viral replication and protein expression.
Pathways	The PB2 protein functions prominently within the viral replication cycle of the influenza A virus. It is intricately linked with the host's mRNA processing pathways as it engages in the cap-snatching mechanism necessary for viral mRNA transcription. PB2 protein works closely with PB1 in the replication pathway where PB1 acts as the RNA-dependent RNA polymerase in conjunction with activities of PB2.
Associated diseases and disorders	PB2 protein plays a significant role in the pathogenicity of influenza A virus infections in humans and animals. Its interactions are pivotal for the adaptation and virulence of the influenza virus leading to significant morbidity during outbreaks. Mutations in the PB2 gene can relate to species adaptation and increased virulence and the protein's function is important for the virus to overcome host defense mechanisms frequently. PB2 interacts with host proteins to

moderate host immune responses making it a target for antiviral drug development and treatment strategies.

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

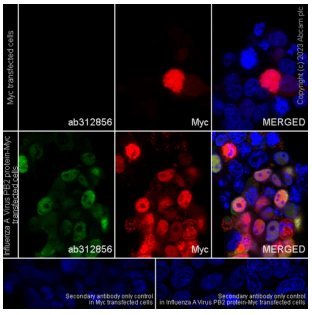
We do not recommend this combination. It is not covered by our product promise.

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.

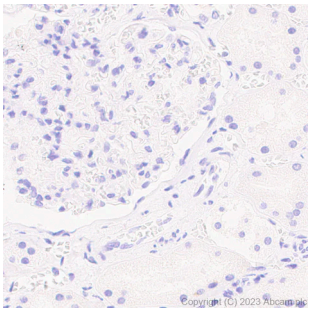
Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images



Immunocytochemistry/ Immunofluorescence - Anti-Influenza A Virus PB2 protein antibody [EPR28249-46] (ab312856)

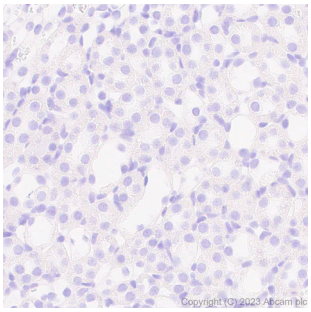
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized 293T (human embryonic kidney epithelial cell) cells labelling Influenza A Virus PB2 protein with ab312856 at 1/1000 (0.513 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green). Confocal image showing positive staining in 293T cells transfected with a Influenza A Virus PB2 protein 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 (2 ug/ml) dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Influenza A Virus PB2 protein antibody [EPR28249-46] (ab312856)

Influenza A Virus PB2 protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human kidney using rabbit Anti-Influenza A Virus PB2 protein antibody

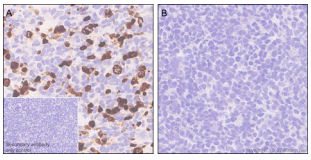
Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling Influenza A Virus PB2 protein with ab312856 at 1/2000 (0.257 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: No staining on human kidney. The section was incubated with ab312856 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 PB2 protein antibody [EPR28249-46] (ab312856)

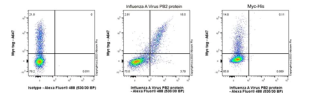
Influenza A Virus PB2 protein Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse kidney using rabbit Anti-Influenza A Virus PB2 protein antibody

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling Influenza A Virus PB2 protein with ab312856 at 1/2000 (0.257 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 ab312856 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 PB2 protein antibody [EPR28249-46] (ab312856)

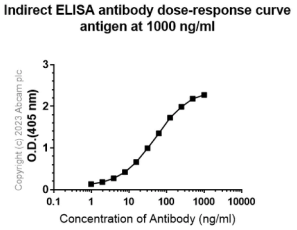
Immunohistochemical analysis of paraffin-embedded Panel A HEK-293T c tissue labeling Influenza A Virus PB2 protein with ab312856 at 1/2000 (0.257 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Cytoplasmic staining on (A) HEK-293T transfected with a Influenza A Virus PB2 protein expression vector and no staining on (B) HEK-293T transfected with empty vector. The section was incubated with ab312856 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.



Flow Cytometry (Intracellular) - Anti-Influenza A Virus PB2 protein antibody [EPR28249-46] (ab312856)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Isotype (Left) / HEK-293T (human embryonic kidney epithelial cells) transfected with a Influenza A Virus PB2 protein expression vector containing a myc-his tag (Middle) / HEK-293T cells transfected with

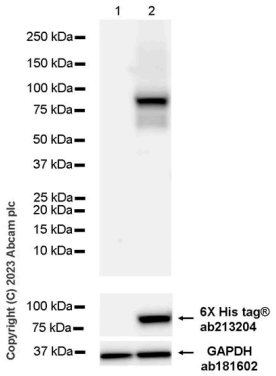
empty vector containing a myc-his tag (Right) cells labelling Influenza A Virus PB2 protein with ab312856 at 1/500 dilution (0.1 ug)/ Middle and Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody 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 PB2 protein antibody [EPR28249-46] (ab312856)

Indirect ELISA analysis of ab312856 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 PB2 protein.

Antigen concentration: 1000 ng/ml



Western blot - Anti-Influenza A Virus PB2 protein antibody [EPR28249-46] (ab312856)

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: 7 seconds
All lanes:
Western blot - Anti-Influenza A Virus PB2 protein antibody [EPR28249-46] (ab312856) at 1/1000 dilution

Lane 1:
HEK-293 (human embryonic kidney) transfected with an empty vector (vector control), containi a myc-His-tag® whole cell lysate at 20 µg

Lane 2:
HEK-293 transfected with a Influenza A Virus PB2 protein expression vector containi a myc-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: 86 kDa

Exposure time: 7s

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