abcam

ab196221

Anti-Interferon alpha 2 antibody [EPR19074]

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	EPR19074
Purification technique	Affinity purification Protein A
Concentration	0.504 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC

Tested

Species	Human
Dilution info	1/1000
Notes	Perform heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/600
Notes	-

Target data

See full target information IFNA2

Function Produced by macrophages, IFN-alpha have antiviral activities.

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	Interferon alpha 2 also known as IFN alpha 2 or IFN alpha 2a/b is a type of cytokine that plays a critical role in the immune response. It is a smaller protein weighing approximately 19.5 kDa mainly expressed by leukocytes such as macrophages and dendritic cells. This protein exhibits antiviral antiproliferative and immunomodulatory activities by binding to specific receptors on target cells. Researchers often study interferon alpha through recombinant protein studies which can be simulated by companies like PeproTech. Additionally ELISA assays facilitate the quantitative measurement of interferon alpha levels in various biological samples.
Biological function summary	Interferon alpha 2 engages in complex signaling with other immune factors to establish an antiviral state in cells. This protein binds to the IFNAR1 and IFNAR2 receptor complex initiating a cascade that activates genes responsible for immune defense. By doing so it triggers the transcription of various antiviral proteins and

	enhances the activity of immune cells including natural killer cells and macrophages. Its function is also evaluated in reconstitution studies such as PeproTech's IL-2 reconstitution to investigate broader immune functions.
Pathways	Researchers observe interferon alpha 2 predominantly within the JAK-STAT signaling pathway. This pathway is vital in transmitting the extracellular signal through to the gene transcription process leading to an appropriate immune response. STAT proteins such as STAT1 and STAT2 form a transcription complex following activation by JAK kinases. Interferon alpha 2's interactions in the pathway exemplify how this cytokine links with other components for immune regulation coordinating with other proteins like ISGF3 to amplify antiviral responses.
Associated diseases and disorders	Scientists associate interferon alpha 2 with chronic viral infections and certain cancers. For example its therapeutic application has been prominent in treating hepatitis C and some hematological malignancies. In viral infections interferon alpha inhibits viral replication and enhances antiviral immunity. In cancer it suppresses cell proliferation and regulates immune surveillance. The protein's levels and activity can correlate with pathological states influenced by other proteins such as IFN-lambda and TNF-alpha highlighting its role in disease mechanisms and therapeutic interventions.

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

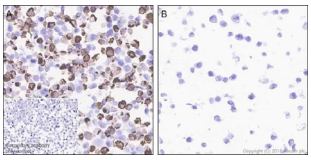
We do not recommend this combination. It is not covered by our product promise.

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.

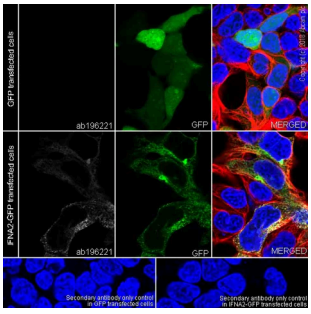
5 product images



Immunocytochemistry - Anti-Interferon alpha 2 antibody [EPR19074] (ab196221)

Interferon alpha 2 Immunocytochemistry staining using rabbit Anti-Interferon alpha 2 antibody

Immunocytochemical analysis of agarose-embedded HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) (transfected with Interferon alpha 2 (pcDNA3.1 (+)-EGFP-Myc)) cells labeling Interferon alpha 2 with ab196221 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use secondary antibody. Positive staining on HEK-293T cells transfected with Interferon alpha 2 (pcDNA3.1 (+)-EGFP-Myc) (image A); and no staining on HEK-293T cells without transfection (image B). Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of ab196221, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use.

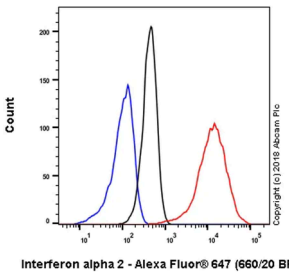


Immunocytochemistry/ Immunofluorescence - Anti-Interferon alpha 2 antibody [EPR19074] (ab196221)

Interferon alpha 2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Interferon alpha 2 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) (transfected with either GFP-tagged Interferon alpha 2 expression vector or empty GFP expression vector) cells labeling Interferon alpha 2 with ab196221 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 647) (ab150079) secondary antibody at 1/1000 dilution. Confocal image showing cytoplasmic staining in HEK-293T cells transfected with GFP-tagged Interferon alpha 2 expression vector.
The nuclear counterstain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red).

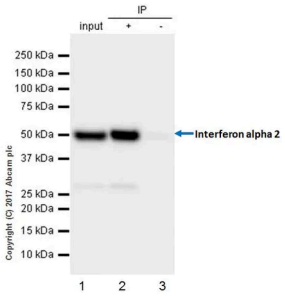
Secondary antibody only control: Used PBS instead of ab196221, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 647) (ab150079) secondary antibody at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-Interferon alpha 2 antibody [EPR19074] (ab196221)

Interferon alpha 2 Flow Cytometry (Intracellular) staining using rabbit Anti-Interferon alpha 2 antibody

Intracellular flow cytometric analysis of4% paraformaldehyde-fixed, 90% methanol-permeabilized HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) (transfected with Interferon alpha 2 expression vector containing a GFP-His-tag cell line) cells labeling Interferon alpha 2 with ab196221 at 1/600 (red) compared with Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue).
Goat Anti-Rabbit IgG H&L (Alexa Fluorr® 647) (ab150079), at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-Interferon alpha 2 antibody [EPR19074] (ab196221)

Interferon alpha 2 was immunoprecipitated from 0.35 mg of HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) (transfected with Interferon alpha 2 expression vector containing a GFP-His-tag) whole cell lysate using ab196221 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab196221 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10,000 dilution.
Lane 1: HEK-293T (transfected with Interferon alpha 2 expression vector containing a GFP-His-tag) whole cell lysate 10 µg (Input).

Lane 2: ab196221 IP in HEK-293T (transfected with Interferon alpha 2 expression vector containing a GFP-His-tag) whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab196221 inHEK-293T (transfected with Interferon alpha 2 expression vector containing a GFP-His-tag) whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Exposure time: 1 second.

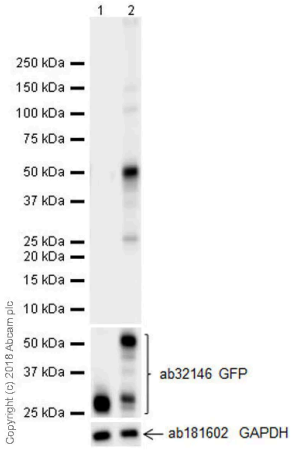
The molecular mass observed is due to the presence of the GFP epitope tag on full length IFN alpha 2.

All lanes:
Immunoprecipitation - Anti-Interferon alpha 2 antibody [EPR19074] (ab196221)

Developed using the ECL technique.

Predicted band size: 22 kDa

Observed band size: 50 kDa



Western blot - Anti-Interferon alpha 2 antibody [EPR19074] (ab196221)

Blocking and dilution buffer: 5% NFDM/TBST.
The molecular mass observed is due to the presence of the GFP epitope tag on full length IFN alpha 2.

All lanes:
Western blot - Anti-Interferon alpha 2 antibody [EPR19074] (ab196221) at 1/5000 dilution

Lane 1:
HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) transfected with an empty vector, containing a GFP-Myc-tag, whole cell lysate at 10 µg

Lane 2:
HEK-293T transfected with Interferon alpha 2 expression vector containing a GFP-Myc-tag, whole cell lysate at 10 µg

Secondary

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

Developed using the ECL technique.

Predicted band size: 22 kDa

Observed band size: 50 kDa

Exposure time: 3s

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