abcam

ab308498

Anti-IFNAR2 antibody [EPR24706-26]

Anti-IFNAR2 antibody [EPR24706-26] is a Rabbit Monoclonal antibody that is used in IFNAR2 Flow Cytometry, ICC/IF, IP, Western Blot. Suitable for Human samples.

IFNAR2, a subunit of the type I interferon receptor, is crucial in mediating antiviral responses and immune regulation. Research has highlighted its significance in COVID-19, where genetic variants and expression levels of IFNAR2 are linked to disease severity and patient outcomes. This makes IFNAR2 a potential target for therapeutic interventions in viral infections and immune-related conditions.

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	EPR24706-26
Purification technique	Affinity purification Protein A
Concentration	0.466 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-

Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information IFNAR2

Function

Together with IFNAR1, forms the heterodimeric receptor for type I interferons (including interferons alpha, beta, epsilon, omega and kappa) (PubMed:10049744, PubMed:10556041, PubMed:21854986, PubMed:26424569, PubMed:28165510, PubMed:32972995, PubMed:7665574, PubMed:7759950, PubMed:8181059, PubMed:8798579, PubMed:8969169). Type I interferon binding activates the JAK-STAT signaling cascade, resulting in transcriptional activation or repression of interferon-regulated genes that encode the effectors of the interferon response (PubMed:10049744, PubMed:17517919, PubMed:21854986, PubMed:26424569, PubMed:28165510, PubMed:32972995, PubMed:7665574, PubMed:7759950, PubMed:8181059, PubMed:8798579, PubMed:8969169). Mechanistically, type I interferon-binding brings the IFNAR1 and IFNAR2 subunits into close proximity with one another, driving their associated Janus kinases (JAKs) (TYK2 bound to IFNAR1 and JAK1 bound to IFNAR2) to cross-phosphorylate one another (PubMed:10556041, PubMed:11682488, PubMed:12105218, PubMed:21854986,

PubMed:32972995). The activated kinases phosphorylate specific tyrosine residues on the intracellular domains of IFNAR1 and IFNAR2, forming docking sites for the STAT transcription factors (STAT1, STAT2 and STAT) (PubMed:11682488, PubMed:12105218, PubMed:21854986, PubMed:32972995). STAT proteins are then phosphorylated by the JAKs, promoting their translocation into the nucleus to regulate expression of interferon-regulated genes (PubMed:12105218, PubMed:28165510, PubMed:9121453). Isoform 3. Potent inhibitor of type I IFN receptor 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	IFNAR2 also known as Interferon Alpha/Beta Receptor 2 is a critical part of the immune system. It pairs with IFNAR1 to form the receptor complex binding type I

	interferons such as IFN-alpha and IFN-beta. The IFNAR2 protein itself weighs roughly 60 kDa. You can find it expressed on the surface of almost all cell types making it a versatile participant in cellular immune responses. Cellular assays such as IFN-alpha ELISA often use IFNAR2 to quantify type I interferon activity and researchers frequently study it to understand its role in immune regulation.
Biological function summary	IFNAR2 plays a role in mediating the effects of type I interferons. It forms part of a receptor complex with IFNAR1 to initiate signal transduction upon binding to its ligands leading to activation of the JAK-STAT signaling pathway. This pathway then induces the expression of interferon-stimulated genes (ISGs) that promote antiviral defense cell growth control and modulation of the immune response. Without the function of IFNAR2 within this complex cells would be unable to respond appropriately to viral infections.
Pathways	IFNAR2 is widely recognized in its involvement with the JAK-STAT pathway. Through this pathway IFNAR2 interacts closely with various proteins like JAK1 and STAT1 propagating the signal that leads to the transcription of numerous ISGs. Another vital pathway involving IFNAR2 is the induction of cytokines which influences the adaptive immune response. Its position within these pathways illustrates its functional importance in antiviral defense and immune system regulation.
Associated diseases and disorders	IFNAR2 has associations with multiple sclerosis and systemic lupus erythematosus. In multiple sclerosis type I interferon pathways mediated by IFNAR2 can modulate immune responses implicated in the progression of this neurodegenerative disorder. Increased IFNAR2 activity might exacerbate lupus characterized by improper immune system regulation. IFN-alpha a cytokine closely linked to IFNAR2 plays a pivotal role in these conditions highlighting its importance in disease development and potential therapeutic targeting.

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

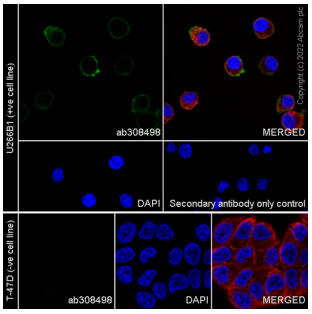
We do not recommend this combination. It is not covered by our product promise.

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.

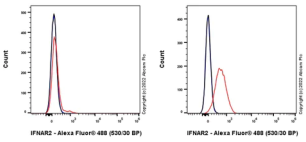
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-IFNAR2 antibody [EPR24706-26] (ab308498)

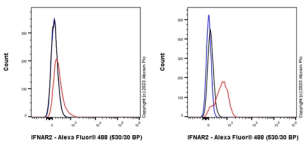
IFNAR2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-IFNAR2 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized U266B1 (human multiple myeloma B lymphocyte) cells labelling IFNAR2 with ab308498 at 1/50 (9.46 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 membranous staining in U266B1 cell line.Negative control: T-47D.Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/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.



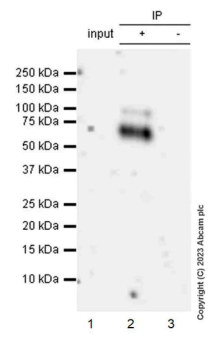
Flow Cytometry - Anti-IFNAR2 antibody [EPR24706-26] (ab308498)

Flow cytometric analysis of T-47D (human ductal breast epithelial tumor epithelial cell, Left) / U266b1 (human multiple myeloma B lymphocyte, Right) cells labelling IFNAR2 with ab308498 at 1/50 dilution (1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody. Negative control: T-47D. Gated on viable cells.



Flow Cytometry - Anti-IFNAR2 antibody [EPR24706-26] (ab308498)

Flow cytometric analysis of MCF7 (human breast adenocarcinoma epithelial cell, Left) / HEL (human erythroleukemia erythroblast, Right) cells labelling IFNAR2 with ab308498 at 1/50 dilution (1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody. Negative control: MCF7. Gated on viable cells.



Immunoprecipitation - Anti-IFNAR2 antibody [EPR24706-26] (ab308498)

IFNAR2 was immunoprecipitated from 0.35 mg U266B1 (human multiple myeloma B lymphocyte) whole cell lysate with ab308498 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab308498 at 1/1000 dilution. VeriBlot for IP secondary antibody (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: U266B1 (human multiple myeloma B lymphocyte) whole cell lysate
Lane 2: ab308498 IP in U266B1 (human multiple myeloma B lymphocyte) whole cell lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab308498 in U266B1 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 180 seconds
All lanes:
Immunoprecipitation - Anti-IFNAR2 antibody [EPR24706-26] (ab308498) at 1/1000 dilution

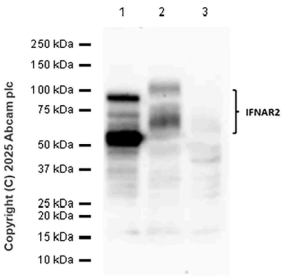
All lanes:
U266B1 (human multiple myeloma B lymphocyte) whole cell lysate at 10 µg

Secondary

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

Observed band size: 57 kDa, 80 kDa

Exposure time: 180s



Western blot - Anti-IFNAR2 antibody [EPR24706-26] (ab308498)

IFNAR2 Western blot staining using rabbit Anti-IFNAR2 antibody

Low expression: T-47D.

Samples are non-boiled as boiling may cause protein aggregation.

All lanes:
Western blot - Anti-IFNAR2 antibody [EPR24706-26] (ab308498) at 1/1000 dilution

Lane 1:
U266B1 (human multiple myeloma B lymphocyte) whole cell lysate at 20 µg

Lane 2:
HEL (erythroleukemia erythroblast) whole cell lysate at 20 µg

Lane 3:
T-47D (human ductal breast epithelial tumor epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Performed under non-reducing conditions.

Observed band size: 57-80 kDa

Exposure time: 80s

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