abcam

ab133354

Anti-ILF3 antibody [EPR3627]

Recombinant | RabMAb

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	EPR3627
Purification technique	Affinity purification Protein A
Concentration	0.13 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/6000
Notes	**For unpurified use at 1/100 - 1/250.**

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/250
Notes	-

WB

Tested

Species	Human
Dilution info	1/2000 - 1/5000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Target data

See full target information ILF3

Function

RNA-binding protein that plays an essential role in the biogenesis of circular RNAs (circRNAs) which are produced by back-splicing circularization of pre-mRNAs. Within the nucleus, promotes circRNAs processing by stabilizing the regulatory elements residing in the flanking introns of the circularized exons. Plays thereby a role in the back-splicing of a subset of circRNAs (PubMed:28625552). As a consequence, participates in a wide range of transcriptional and post-transcriptional processes. Binds to poly-U elements and AU-rich elements (AREs) in the 3'-UTR of target mRNAs (PubMed:14731398). Upon viral infection, ILF3 accumulates in the cytoplasm and participates in the innate antiviral response (PubMed:21123651, PubMed:34110282). Mechanistically, ILF3 becomes phosphorylated and activated by the double-stranded RNA-activated protein kinase/PKR which releases ILF3 from cellular mature circRNAs. In turn, unbound ILF3 molecules are able to interact with and thus inhibit viral mRNAs (PubMed:21123651, PubMed:28625552). (Microbial infection) Plays a positive role in HIV-1 virus production by binding to and thereby stabilizing HIV-1 RNA, together with ILF3.

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

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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 ILF3 protein also known as Interleukin enhancer-binding factor 3 plays an important role in cellular mechanisms. It has a molecular mass of approximately 90 kDa and is expressed broadly in various tissues such as the liver kidney and spleen. ILF3 is part of the double-stranded RNA-binding proteins and it engages in regulating RNA metabolism processes. Scientists also refer to ILF3 as NF90 and it is known for its function in modulating gene expression by interacting with RNA.

Biological function summary	ILF3 interacts with RNA and proteins within the cell to control the stability and translation of mRNA. It acts as a component of various ribonucleoprotein complexes indicating its role in post-transcriptional regulation. ILF3 can bind to double-stranded RNA and single-stranded RNA motifs affecting the proliferation and differentiation of cells in which it is expressed. It also contributes significantly in cellular stress responses impacting how cells respond to environmental changes.
Pathways	ILF3 is involved in important cellular pathways such as RNA processing and antiviral defense mechanisms. In the RNA processing pathway ILF3 associates with proteins such as Drosha impacting microRNA biogenesis. Additionally in antiviral responses it identifies and binds viral RNAs initiating defensive cellular responses. These pathways position ILF3 as integral to maintaining cellular homeostasis during stress and infection.
Associated diseases and disorders	ILF3 has connections to cancer and viral infections. Aberrations in ILF3 expression or function are observed in certain cancers where it influences tumor progression by interacting with oncogenic pathways. In viral infections like those caused by hepatitis C virus ILF3 contributes to host defense by modulating immune responses. It interacts with proteins like RIG-I in the context of viral infections facilitating antiviral signaling pathways to control disease progression.

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

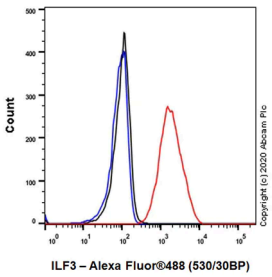
We do not recommend this combination. It is not covered by our product promise.

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.

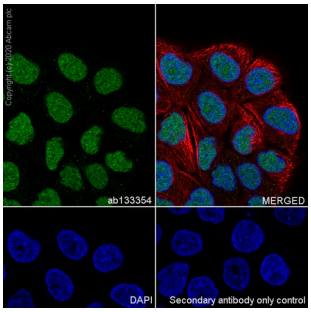
5 product images



Flow Cytometry (Intracellular) - Anti-ILF3 antibody [EPR3627] (ab133354)

ILF3 Flow Cytometry (Intracellular) staining using rabbit Anti-ILF3 antibody

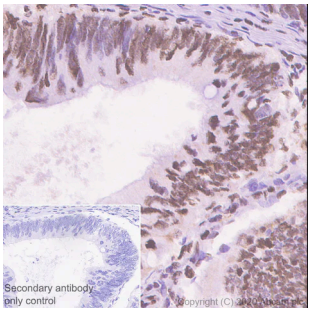
Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling ILF3 with Purified ab133354 at 1/50 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-ILF3 antibody [EPR3627] (ab133354)

ILF3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ILF3 antibody

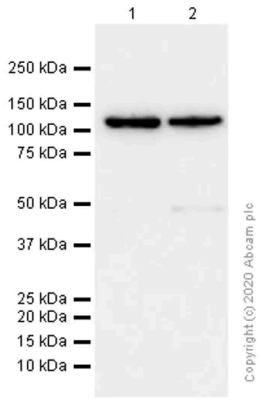
Immunocytochemistry analysis of A431 (Human epidermoid carcinoma epithelial cell) cells labeling ILF3 with Purified ab133354 at 1/50 dilution (2.6 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 dilution (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 dilution (2 µg/mL). DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ILF3 antibody [EPR3627] (ab133354)

ILF3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ILF3 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon cancer tissue sections labeling ILF3 with Purified ab133354 at 1/6000 dilution (0.09 µg/mL). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Western blot - Anti-ILF3 antibody [EPR3627] (ab133354)

ILF3 Western blot staining using rabbit Anti-ILF3 antibody

ab133354 recognizes only NF110 isoform of ILF3.
All lanes:
Western blot - Anti-ILF3 antibody [EPR3627] (ab133354) at 1/2000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

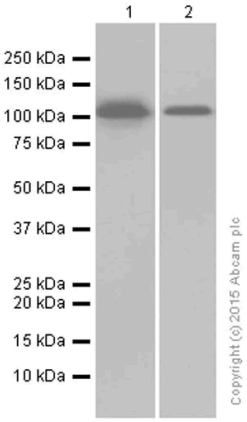
Lane 2:
A431 (Human epidermoid carcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 95 kDa

Observed band size: 110 kDa



Western blot - Anti-ILF3 antibody [EPR3627] (ab133354)

ILF3 Western blot staining using rabbit Anti-ILF3 antibody

ab133354 recognizes only NF110 isoform of ILF3.
All lanes:
Western blot - Anti-ILF3 antibody [EPR3627] (ab133354) at 1/20000 dilution

Lane 1:
K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysate at 15 µg

Lane 2:
Raji (Human Burkitt's lymphoma B lymphocyte) whole cell lysate at 15 µg

Secondary

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

Predicted band size: 14 kDa, 63 kDa, 95 kDa

Observed band size: 110 kDa, 30 kDa, 63 kDa, 65 kDa

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