abcam

ab240158

Anti-NELFe antibody [EPR11600] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR11600
Purification technique	Affinity purification Protein A
Concentration	1.019 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Expected

Species	Mouse, Rat, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information NELFE

Function Essential component of the NELF complex, a complex that negatively regulates the elongation of transcription by RNA polymerase II (PubMed:10199401, PubMed:27256882). The NELF complex, which acts via an association with the DSIF complex and causes transcriptional pausing, is counteracted by the P-TEFb kinase complex (PubMed:11940650, PubMed:12612062, PubMed:27256882). Provides the strongest RNA binding activity of the NELF complex and may initially recruit the NELF complex to RNA (PubMed:18303858, PubMed:27256882, PubMed:27282391). (Microbial infection) The NELF complex is involved in HIV-1 latency possibly involving recruitment of PCF11 to paused RNA polymerase II.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab240158 is the carrier-free version of ab170104.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	NELFe also known as Negative Elongation Factor E or NELF-A plays an important role in regulating transcription elongation. NELFe has a mass of approximately 66 kDa. Expression of NELFe occurs broadly across various tissues which suggests its involvement in numerous cellular processes. This protein forms part of the NELF complex which interacts with RNA Polymerase II pausing transcription at specific genes. NELFe along with other components contributes to the binding to nascent RNA and halting transcription temporarily.
Biological function summary	NELFe influences gene expression by controlling the pausing of RNA Polymerase II which impacts the timing and localization of transcription. NELFe operates within a larger complex known as the Negative Elongation Factor complex that consists of NELF-A (NELFe) NELF-B NELF-C/D and NELF-E. This complex enables precise regulation of transcriptional pausing and subsequent release when appropriate signals arrive. The coordinated action of this complex ensures proper gene expression profiles necessary for development and cell differentiation.
Pathways	NELFe fits prominently in the transcription regulation pathway where it controls RNA Polymerase II pausing and release. NELFe interacts with the protein P-TEFb (Positive Transcription Elongation Factor b) which phosphorylates NELF complex components to release the pause allowing elongation. Another significant pathway involves NELFe in the regulation of heat shock genes where the heat shock factor 1

	(HSF1) modulates the transcriptional pause release in response to stress showing NELFe's role in cellular stress responses.
Associated diseases and disorders	NELFe has links to cancer and viral infections where its dysregulation can affect normal gene expression. In certain cancers unregulated pausing or failure to release transcription elongation can contribute to uncontrolled cell proliferation. Furthermore in the context of human immunodeficiency virus (HIV) infections NELFe and its related NELF complex play a role in viral latency. The related protein Tat interacts with NELFe highlighting its importance in HIV transcription regulation. Understanding NELFe's role in these diseases provides insight into potential therapeutic targets for intervention.

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

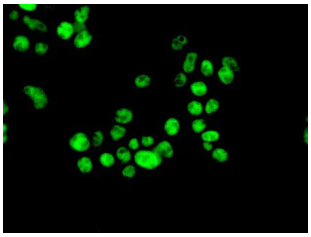
We do not recommend this combination. It is not covered by our product promise.

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.

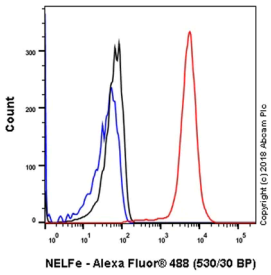
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-NELFe antibody [EPR11600] - BSA and Azide free (ab240158)

NELFe Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NELFe antibody

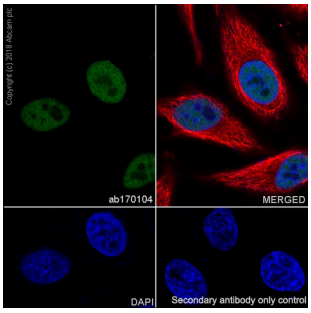
Immunofluorescence analysis of HepG2 cells labeling NELFe with ab170104 at a 1/100 dilution.
This image was generated using the unpurified version of the product.



Flow Cytometry (Intracellular) - Anti-NELFe antibody [EPR11600] - BSA and Azide free (ab240158)

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

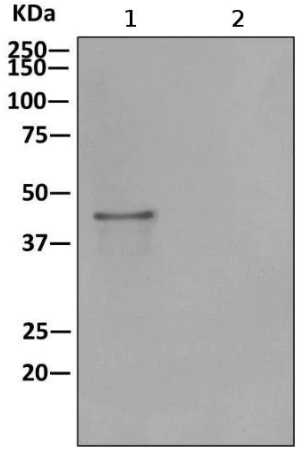
Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling NELFe with Purified ab170104 at 1/300 dilution (1µg/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab170104).



Immunocytochemistry/ Immunofluorescence - Anti-NELFe antibody [EPR11600] - BSA and Azide free (ab240158)

NELFe Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-NELFe antibody

Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling NELFe with Purified ab170104 at 1:500 dilution (0.5 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 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab170104).



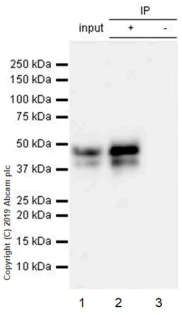
Immunoprecipitation - Anti-NELFe antibody [EPR11600] - BSA and Azide free (ab240158)

Western blot analysis on immunoprecipitation pellet from HeLa cell lysate (lane 1) or 1X PBS (negative control) (lane 2) using ab170104, and HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab170104).

This image was generated using the unpurified version of the product.

All lanes:
Immunoprecipitation - Anti-NELFe antibody [EPR11600] - BSA and Azide free (ab240158)

Predicted band size: 43 kDa



Immunoprecipitation - Anti-NELFe antibody [EPR11600] - BSA and Azide free (ab240158)

ab170104 (purified) at 1:20 dilution (2µg) immunoprecipitating NELFe in HeLa whole cell lysate.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg
Lane 2 (+): ab170104 & HeLa whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab170104 in HeLa whole cell lysate
For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used for detection at 1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab170104).

All lanes:
Immunoprecipitation - Anti-NELFe antibody [EPR11600] (ab170104)

Predicted band size: 43 kDa

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