abcam

ab248836

Anti-PEF1 antibody [EPR9310] - 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	EPR9310
Purification technique	Affinity purification

Reactivity data

WB

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, 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 PEF1

Function	Calcium-binding protein that acts as an adapter that bridges unrelated proteins or stabilizes weak protein-protein complexes in response to calcium. Together with PDCD6, acts as a calcium-dependent adapter for the BCR(KLHL12) complex, a complex involved in endoplasmic reticulum (ER)-Golgi transport by regulating the size of COPII coats (PubMed:27716508). In response to cytosolic calcium increase, the heterodimer formed with PDCD6 interacts with, and bridges together the BCR(KLHL12) complex and SEC31 (SEC31A or SEC31B), promoting monoubiquitination of SEC31 and subsequent collagen export, which is required for neural crest specification (PubMed:27716508). Its role in the heterodimer formed with PDCD6 is however unclear: some evidence shows that PEF1 and PDCD6 work together and promote association between PDCD6 and SEC31 in presence of calcium (PubMed:27716508). Other reports show that PEF1 dissociates from PDCD6 in presence of calcium, and may act as a negative regulator of PDCD6 (PubMed:11278427). Also acts as a negative regulator of ER-Golgi transport; possibly by inhibiting interaction between PDCD6 and SEC31 (By similarity).

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

ab248836 is the carrier-free version of ab137127.

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	PEF1 also known as Peflin is a calcium-binding protein with a molecular weight of approximately 29 kDa. This protein is situated in the cytoplasm and localizes predominantly in the brain and heart tissues. PEF1 is part of the penta-EF-hand protein family characterized by its EF-hand calcium-binding motifs which allow it to sense calcium ion concentrations and mediate cellular processes.
Biological function summary	PEF1 plays a significant role in calcium-dependent signaling pathways. It frequently partners with sorcin to form a heterodimeric complex that regulates intracellular calcium levels critical for cellular homeostasis. By binding calcium ions PEF1 modulates the function of various calcium-dependent proteins facilitating communication between cellular signaling mechanisms.
Pathways	PEF1 integrates into cellular signaling mechanisms by modulating the availability of free calcium ions. It is specifically active in the calcineurin/NFAT pathway important for T-cell activation and myocardial function. PEF1's interaction with sorcin allows it to modulate the activity of other proteins like ryanodine receptors which are important for calcium release from the sarcoplasmic reticulum.
Associated diseases and disorders	PEF1 has been linked to cardiac hypertrophy and neurodegenerative conditions like Alzheimer's disease. PEF1's dysregulation can disrupt calcium homeostasis contributing to these conditions. In cardiac hypertrophy for instance abnormal PEF1 levels affect calcineurin/NFAT signaling leading to pathological heart growth. In Alzheimer's disease altered PEF1 function may be associated with the perturbation of calcium-regulated processes critical for neuronal survival.

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.

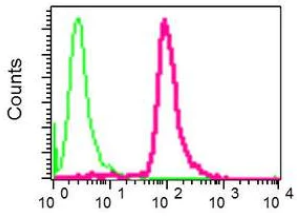
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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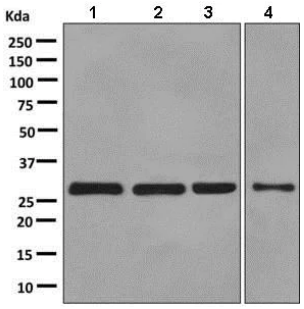
2 product images



Flow Cytometry (Intracellular) - Anti-PEF1 antibody [EPR9310] - BSA and Azide free (ab248836)

PEF1 Flow Cytometry (Intracellular) staining using rabbit Anti-PEF1 antibody

This data was developed using ab137127, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized 293T cells labelling PEF1 with ab137127 at 1/10 dilution (red) or a rabbit IgG (negative) (green).



Western blot - Anti-PEF1 antibody [EPR9310] - BSA and Azide free (ab248836)

PEF1 Western blot staining using rabbit Anti-PEF1 antibody

This data was developed using ab137127, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-PEF1 antibody [EPR9310] (ab137127) at 1/1000 dilution

Lane 1:
Jurkat cell lysate at 10 µg

Lane 2:
HeLa cell lysate at 10 µg

Lane 3:
293T cell lysate at 10 µg

Lane 4:
HL60 cell lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 30 kDa

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