abcam

ab232029

Anti-FOXO4/AFX antibody [EPR5442] - 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	EPR5442
Purification technique	Affinity purification Protein A
Concentration	0.998 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	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information FOXO4

Function	Transcription factor involved in the regulation of the insulin signaling pathway. Binds to insulin-response elements (IREs) and can activate transcription of IGFBP1. Down-regulates expression of HIF1A and suppresses hypoxia-induced transcriptional activation of HIF1A-modulated genes. Also involved in negative regulation of the cell cycle. Involved in increased proteasome activity in embryonic stem cells (ESCs) by activating expression of PSMD11 in ESCs, leading to enhanced assembly of the 26S proteasome, followed by higher proteasome activity.

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

ab232029 is the carrier-free version of ab128908.

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	FOXO4 also known as AFX is part of the FoxO family of transcription factors and weighs about 74 kDa. It operates as an important player in transcriptional regulation by binding to specific DNA sequences. This protein modulates gene expression linked to apoptosis cell cycle regulation and oxidative stress resistance. FOXO4 commonly expresses in tissues like the liver skeletal muscle and adipose tissue where it carries out critical cellular functions.
Biological function summary	This protein influences processes essential for cell survival and metabolism. FOXO4 forms part of the larger forkhead box family of transcription factors. Inside cells it regulates genes involved in mechanisms such as gluconeogenesis and immune responses. It can also interact with other proteins like 14-3-3 which helps control its nuclear-cytoplasmic shuttling impacting its activity.
Pathways	FOXO4 becomes an integral part of the insulin signaling and oxidative stress response pathways. In the insulin pathway FOXO4 activity suppresses in response to insulin signals that trigger the PI3K/Akt pathway. Akt phosphorylates FOXO4 disallowing it from entering the nucleus. FOXO4 relates closely with FOXO1 and FOXO3 within these pathways where their coordinated activities help maintain energy homeostasis and cellular stress responses.
Associated diseases and disorders	FOXO4 involvement becomes apparent in conditions such as diabetes and cancer. In diabetes disrupted insulin signaling impacts FOXO4 activity impairing glucose metabolism. In cancer FOXO4's role in cell cycle arrest and apoptosis associates it with tumor suppression and progression. Its interaction with proteins like p53 influences cellular responses to oncogenic stress marking FOXO4 as a significant factor in oncological research.

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.

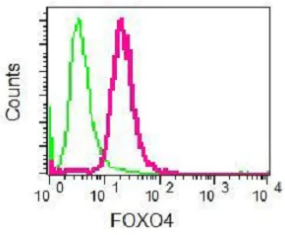
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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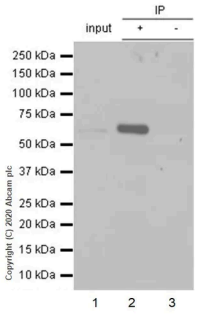
3 product images



Flow Cytometry (Intracellular) - Anti-FOXO4/AFX antibody [EPR5442] - BSA and Azide free (ab232029)

FOXO4/AFX Flow Cytometry (Intracellular) staining using rabbit Anti-FOXO4/AFX antibody

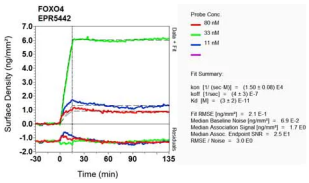
Intracellular flow cytometric analysis of FOXO4/AFX in permeabilized HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) cells using ab128908 at 1/100 dilution (Red) compared to a non-specific negative control antibody (green).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab128908).



Immunoprecipitation - Anti-FOXO4/AFX antibody [EPR5442] - BSA and Azide free (ab232029)

Purified ab128908 at 1/100 dilution (2µg) immunoprecipitating FOXO4/AFX in 293T whole cell lysate.
Lane 1 (input): 293T (Human embryonic kidney epithelial cell) whole cell lysate 10µg
Lane 2 (+): ab128908 + 293T whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab128908 in 293T whole cell lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/1000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 65 kDa
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab128908).
All lanes:
Immunoprecipitation - Anti-FOXO4/AFX antibody [EPR5442] (ab128908)

Predicted band size: 53 kDa



OI-RD Scanning - Anti-FOXO4/AFX antibody [EPR5442] - BSA and Azide free (ab232029)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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