abcam

ab211325

Anti-ZCCHC4 antibody [EPR20492]

Recombinant | RabMAb | KO Validated

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
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR20492
Purification technique	Affinity purification Protein A
Concentration	0.952 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/50
Notes	-

Predicted

Species	Primates
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	This antibody works best on a semi-dry nitrocellulose membrane transfer system.

Predicted

Species	Primates
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	-

Predicted

Species	Primates
Dilution info	-
Notes	-

Target data

See full target information rRNA N6-adenosine-methyltransferase ZCCHC4

Function	rRNA N6-methyltransferase that specifically methylates the adenine in position 4220 of 28S rRNA (PubMed:30531910, PubMed:31328227, PubMed:31695039, PubMed:31799605). N6-methylation of adenine(4220) in 28S rRNA is required for translation (PubMed:30531910, PubMed:31799605).

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	ZCCHC4 also known as zinc finger CCHC-type containing 4 is a protein that functions as a methyltransferase specifically modifying mRNA by adding a methyl group at the N6 position of adenine. It has an estimated mass of approximately 66 kDa. Expression of ZCCHC4 is observed mainly in the nucleus of cells and it is found across various human tissues indicating its widespread functional importance.

Biological function summary	The methyltransferase activity of ZCCHC4 plays an important role in post-transcriptional regulation of mRNA influencing its stability and translation efficiency. ZCCHC4 is part of a complex that also includes other proteins involved in RNA metabolism. Its function impacts gene expression by modulating the epigenetic marks on mRNA thereby altering the cellular response to different stimuli.
Pathways	ZCCHC4 contributes significantly to the epitranscriptome particularly affecting the m6A RNA methylation pathway. This modification is vital for processes like RNA splicing export and degradation. ZCCHC4 interacts with related proteins such as METTL3 and METTL14 which are core components of the m6A methyltransferase complex highlighting its integration within this regulatory network.
Associated diseases and disorders	Alterations in ZCCHC4 expression or function associate with certain cancers including liver cancer. Dysregulation of m6A modification in which ZCCHC4 is involved contributes to tumor progression and metastasis. Research has also linked ZCCHC4 to mental disorders with evidence suggesting that abnormal mRNA methylation affects neural gene expression. ZCCHC4's interactions with proteins like ALKBH5 an m6A demethylase further illustrate its involvement in the pathogenesis of these diseases.

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

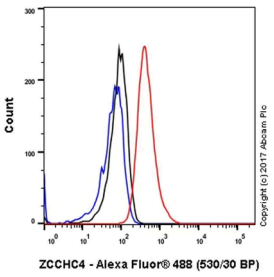
We do not recommend this combination. It is not covered by our product promise.

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.

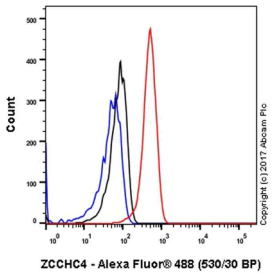
4 product images



Flow Cytometry (Intracellular) - Anti-ZCCHC4 antibody [EPR20492] (ab211325)

ZCCHC4 Flow Cytometry (Intracellular) staining using rabbit Anti-ZCCHC4 antibody

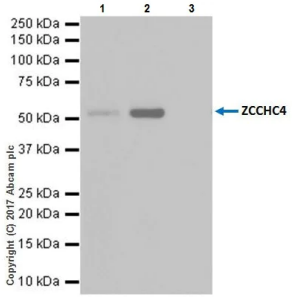
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized HepG2 (human liver hepatocellular carcinoma cell line) cell line labeling ZCCHC4 with ab211325 at 1/100 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.



Flow Cytometry (Intracellular) - Anti-ZCCHC4 antibody [EPR20492] (ab211325)

ZCCHC4 Flow Cytometry (Intracellular) staining using rabbit Anti-ZCCHC4 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cell line labeling ZCCHC4 with ab211325 at 1/100 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-ZCCHC4 antibody [EPR20492] (ab211325)

ZCCHC4 was immunoprecipitated from 0.35 mg of HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab211325 at 1/50 dilution. Western blot was performed from the immunoprecipitate using ab211325 at 1/1,000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10,000 dilution.
Lane 1: HeLa whole cell lysate 10 µg (Input).

Lane 2: ab211325 IP in HeLa whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab211325 in HeLa whole cell lysate.

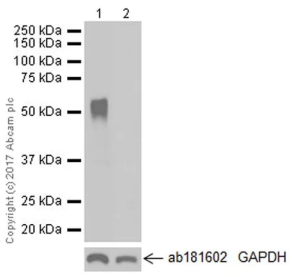
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds.

This antibody works best on a semi-dry nitrocellulose membrane transfer system.

All lanes:
Immunoprecipitation - Anti-ZCCHC4 antibody [EPR20492] (ab211325)

Predicted band size: 59 kDa



Western blot - Anti-ZCCHC4 antibody [EPR20492] (ab211325)

ZCCHC4 Western blot staining using rabbit Anti-ZCCHC4 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
This antibody works best on a semi-dry nitrocellulose membrane transfer system.

These lysates were kindly provided by Prof Chuan He; University of Chicago.

All lanes:
Western blot - Anti-ZCCHC4 antibody [EPR20492] (ab211325) at 1/1000 dilution

Lane 1:
Wild type HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 2:
ZCCHC4 knockout HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 59 kDa

Observed band size: 59 kDa

Exposure time: 30s

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