abcam

ab184962

Anti-PCBP2/hnRNP E2 antibody [EPR14858]

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	EPR14858
Purification technique	Affinity purification Protein A
Concentration	0.573 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/40 - 1/60
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/110
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information PCBP2

Function	Single-stranded nucleic acid binding protein that binds preferentially to oligo dC (PubMed:12414943, PubMed:7607214). Major cellular poly(rC)-binding protein (PubMed:12414943). Also binds poly(rU) (PubMed:12414943). Acts as a negative regulator of antiviral signaling (PubMed:19881509, PubMed:35322803). Negatively regulates cellular antiviral responses mediated by MAVS signaling (PubMed:19881509). It acts as an adapter between MAVS and the E3 ubiquitin ligase ITCH, therefore triggering MAVS ubiquitination and degradation (PubMed:19881509). Negativeley regulates the cGAS-STING pathway via interaction with CGAS, preventing the formation of liquid-like droplets in which CGAS is activated (PubMed:35322803). Together with PCBP1, required for erythropoiesis,

possibly by regulating mRNA splicing (By similarity). (Microbial infection) In case of infection by poliovirus, binds to the viral internal ribosome entry site (IRES) and stimulates the IRES-mediated translation (PubMed:12414943, PubMed:24371074). Also plays a role in initiation of viral RNA replication in concert with the viral protein 3CD (PubMed:12414943).

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	PCBP2 also known as hnRNP E2 is a poly(C) binding protein with a molecular weight of approximately 38 kDa. It binds to single-stranded poly(C) sequences in RNA molecules. PCBP2 is widely expressed in various tissues where it modulates pre-mRNA splicing RNA stability and translation. It functions as part of

	ribonucleoprotein complexes and is known for its role in regulating mRNA transport and localization within the cell.
Biological function summary	A significant function of PCBP2 involves the maintenance of mRNA stability particularly for certain growth factor and cytokine mRNAs. PCBP2 is part of the ribonucleosome complex supporting various cellular processes by regulating the turnover of target mRNAs. Through these actions it helps control cellular proliferation and immune responses. PCBP2 collaborates with several other proteins influencing cellular adaptation to stress and changes in the environment.
Pathways	PCBP2 plays key roles in the Wnt signaling and Toll-like receptor pathways. In the Wnt signaling pathway its interaction with mRNA targets such as beta-catenin is significant for cellular communication processes. In the Toll-like receptor pathway it works alongside proteins like MyD88 modulating innate immune responses to pathogens. PCBP2's participation in these pathways highlights its versatility and influence on cellular and systemic communication networks.
Associated diseases and disorders	Researchers have linked PCBP2 to cancer particularly due to its involvement with oncogene regulation. Disruptions in the expression of PCBP2 can affect cell cycle control contributing to tumorigenesis. PCBP2 also connects with amyotrophic lateral sclerosis (ALS) through its interaction with proteins like TDP-43 which are critical in neurodegenerative disease pathways. Understanding PCBP2's function and its connections to these conditions remains important for developing therapeutic strategies.

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

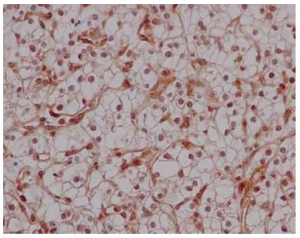
We do not recommend this combination. It is not covered by our product promise.

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:

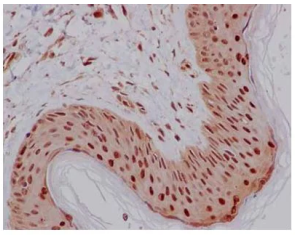
7 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCBP2/hnRNP E2 antibody [EPR14858] (ab184962)

PCBP2/hnRNP E2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PCBP2/hnRNP E2 antibody

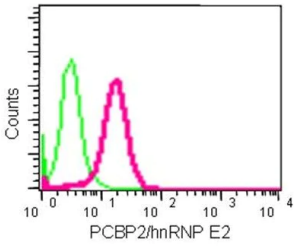
Immunohistochemical analysis of paraffin-embedded Human clear cell carcinoma of kidney tissue labeling PCBP2/hnRNP E2 with ab184962 at 1/100 dilution followed by pre-diluted HRP-conjugated secondary antibody and counter-stained with Hematoxylin.
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PCBP2/hnRNP E2 antibody [EPR14858] (ab184962)

PCBP2/hnRNP E2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PCBP2/hnRNP E2 antibody

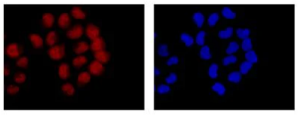
Immunohistochemical analysis of paraffin-embedded human skin tissue labeling PCBP2/hnRNP E2 with ab184962 at 1/100 dilution followed by pre-diluted HRP-conjugated secondary antibody and counter-stained with Hematoxylin.
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-PCBP2/hnRNP E2 antibody [EPR14858] (ab184962)

PCBP2/hnRNP E2 Flow Cytometry (Intracellular) staining using rabbit Anti-PCBP2/hnRNP E2 antibody

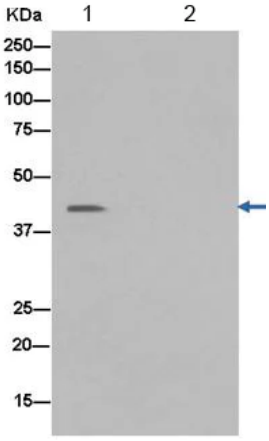
Intracellular flow cytometric anlaysis of HeLa cells (2% paraformaldehyde-fixed)labeling PCBP2/hnRNP E2 with ab184962 at 1/110 dilution (red) or a rabbit IgG (negative) (green), followed by Goat anti rabbit IgG (FITC) secondary at 1/150 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-PCBP2/hnRNP E2 antibody [EPR14858] (ab184962)

PCBP2/hnRNP E2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PCBP2/hnRNP E2 antibody

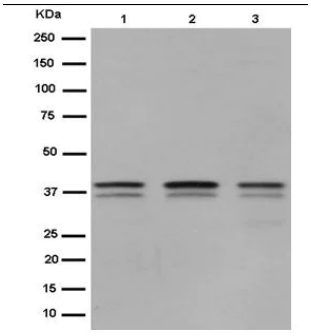
Immunofluorescent analysis of HeLa cells (-20°C Acetone-fixed) labeling PCBP2/hnRNP E2 with ab184962 at 1/250 dilution (red) followed by Goat anti rabbit IgG (Alexa Fluor®555) secondary at 1/200 dilution and counter-stained with DAPI (blue).



Immunoprecipitation - Anti-PCBP2/hnRNP E2 antibody [EPR14858] (ab184962)

Immunoprecipitation analysis of HeLa lysates labeling PCBP2/hnRNP E2 with ab18492 at 1/50 dilution (Lane 1) and PBS (Lane 2). Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG used as secondary antibody.
All lanes:
Immunoprecipitation - Anti-PCBP2/hnRNP E2 antibody [EPR14858] (ab184962)

Predicted band size: 39 kDa



Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14858] (ab184962)

All lanes:
Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14858] (ab184962) at 1/5000 dilution

Lane 1:
HeLa cell lysate

Lane 2:
Raji cell lysate

Lane 3:
K562 cell lysate

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 39 kDa

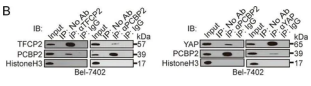


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Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14858] (ab184962)

PCBP2/hnRNP E2 western blot using anti-PCBP2/hnRNP E2 antibody [EPR14858] ab184962. Publication image and figure legend from Liu, Y., Zhang, X., et al., 2019, Cell Death Dis, PubMed 31501420.

ab184962 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab184962 please see the product overview.

CCT3 blocked the interaction between PCBP2 and YAP/TFCP2.a PCBP2 directly interacted with YAP but not with TFCP2, as evaluated by PLA in Bel-7402 and SMMC-7721 cells. Scale bar, 50 μm. b YAP, TFCP2 bond with PCBP2, as measured by co-IP in Bel-7402 cells. c Schematic presentation of the hypothesis that CCT3 might prevent YAP/TFCP2 from interaction with PCBP2. d Interaction between exogenous PCBP2 and YAP, but not between PCBP2 and TFCP2, was identified by co-IP in Bel-7402 cells. e The WB2 motif was essential for the interaction between PCBP2 and YAP, as measured by co-IP in Bel-7402 cells. d, deletion. f The PCBP2-YAP interaction replied on the two WW domains in YAP, as measured by co-IP in Bel-7402 cells. d, deletion. g The WB2 motif was

critical for ubiquitination of YAP and TFCP2. h The WB2 motif of PCBP2 was essential for CCT3-mediated suppression of ubiquitination of YAP and TFCP2, as measured in Bel-7402 cells with or without expressing increasing concentrations of CCT3. i The two WW domains of YAP were prerequisite for suppression of TFCP2 by PCBP2, as measured in control cells, Bel-7402 cells with YAP knocked down with or without simultaneous expressing exogenous YAP-WT/YAP-d2WW. j The two WW domains of YAP were essential for CCT3-induced disassociation of PCBP2 from YAP/TFCP2, as measured by co-IP in Bel-7402 cells. To clearly identify the interaction between PCBP2, TFCP2 and YAP, we artificially adjusted the concentrations of PCBP2 to the same level in the immune precipitates that were immunoprecipitated by the anti-PCBP2 antibodies. Images of WB are representative of three independent experiments

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