abcam

ab251324

Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] - 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	EPR14859(2)
Purification technique	Affinity purification Protein A

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab251324 is the carrier-free version of ab200835.

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	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

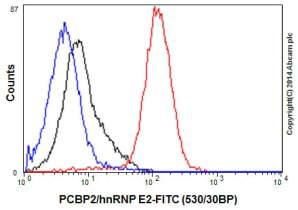
We do not recommend this combination. It is not covered by our product promise.

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:
Terms & Conditions.

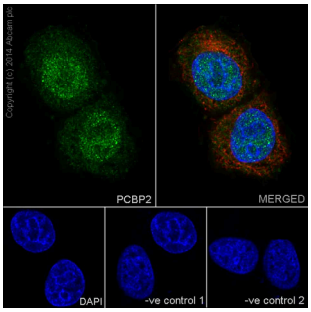
8 product images



Flow Cytometry (Intracellular) - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] - BSA and Azide free (ab251324)

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

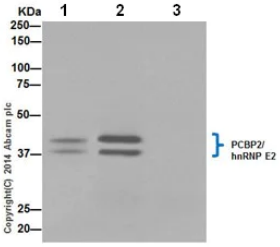
This data was developed using ab200835, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed Jurkat (Human T cell leukemia cells from peripheral blood) cells labeling PCBP2/hnRNP E2 with ab200835 at 1/250 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] - BSA and Azide free (ab251324)

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

This data was developed using ab200835, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling PCBP2/hnRNP E2 with ab200835 at 1/500 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green). Nuclear and cytoplasmic staining on HeLa cell line is observed. The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).
The negative controls are as follows;
-ve control 1: ab200835 at 1/500 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.



Immunoprecipitation - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] - BSA and Azide free (ab251324)

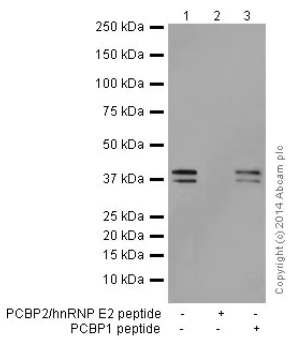
This data was developed using ab200835, the same antibody clone in a different buffer formulation.
PCBP2/hnRNP E2 was immunoprecipitated from 1mg of Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysate with ab200835 at 1/80 dilution. Western blot was performed from the immunoprecipitate using ab200835 at 1/1000 dilution. Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, was used as secondary antibody at 1/1500 dilution.

Lane 1: Jurkat whole cell lysate 10 µg (Input). Lane 2: ab200835 IP in Jurkat whole cell lysate. Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab200835 in Jurkat whole cell lysate.
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 5 seconds

All lanes:
Immunoprecipitation - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] (ab200835)

Predicted band size: 39 kDa



Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] - BSA and Azide free (ab251324)

PCBP2/hnRNP E2 Western blot staining of HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate using rabbit Anti-PCBP2/hnRNP E2 antibody

This data was developed using ab200835, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

Based on sequence analysis, ab200835 (PCBP2/hnRNP E2) shares 80% homology with family member PCBP1. The levels of XR were tested in the accompanying blocking experiment.

All lanes:
Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] (ab200835) at 1/10000 dilution

Lane 1:
HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate at 10 µg

Lane 2:
HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate at 10 µg with PCBP2/hnRNP E2 peptide

Lane 3:
HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate at 10 µg with PCBP1 peptide

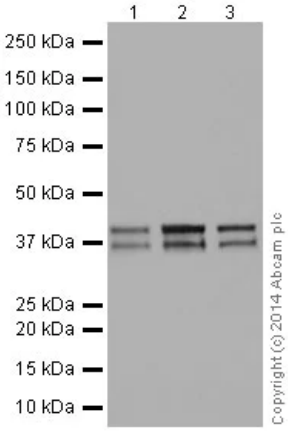
Secondary

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

Predicted band size: 39 kDa

Observed band size: 35 kDa, 39 kDa

Exposure time: 3min



Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] - BSA and Azide free (ab251324)

PCBP2/hnRNP E2 Western blot staining using rabbit Anti-PCBP2/hnRNP E2 antibody

This data was developed using ab200835, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

Based on sequence analysis, ab200835 recognizes isoforms 1-6 which have corresponding Mw between 34-39kDa.

All lanes:
Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] (ab200835) at 1/10000 dilution

Lane 1:
HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 2:
Jurkat (Human T cell leukemia cells from peripheral blood) whole cell lysate at 20 µg

Lane 3:
K562 (Human chronic myelogenous leukemia cells from bone marrow) whole cell lysate at 20 µg

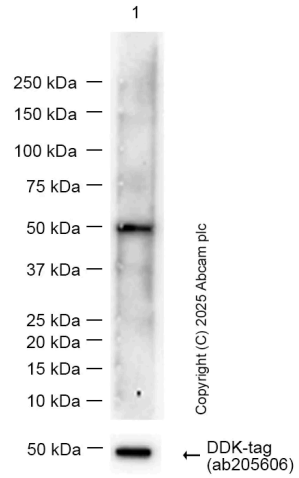
Secondary

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

Predicted band size: 39 kDa

Observed band size: 35 kDa, 39 kDa

Exposure time: 3min



Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] - BSA and Azide free (ab251324)

PCBP2/hnRNP E2 Western blot staining of Recombinant Mouse Pcbp2 Protein, with C-term MYC/DDK tag using rabbit Anti-PCBP2/hnRNP E2 antibody

All lanes:
Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] (ab200835) at 1/1000 dilution

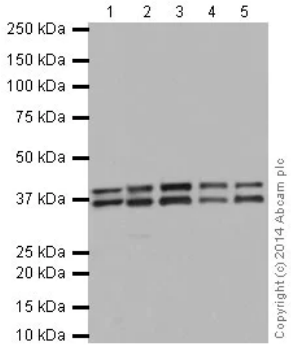
All lanes:
Recombinant Mouse Pcbp2 Protein, with C-term MYC/DDK tag at 10 ng

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 50 kDa

Exposure time: 120s



Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] - BSA and Azide free (ab251324)

This data was developed using ab200835, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] (ab200835) at 1/1000 dilution

Lane 1:
Rat heart lysate at 10 µg

Lane 2:
C6 (Rat glial tumor cells) whole cell lysate at 10 µg

Lane 3:
RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 4:
PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate at 10 µg

Lane 5:
NIH/3T3 (Mouse embryo fibroblast cells) whole cell lysate at 10 µg

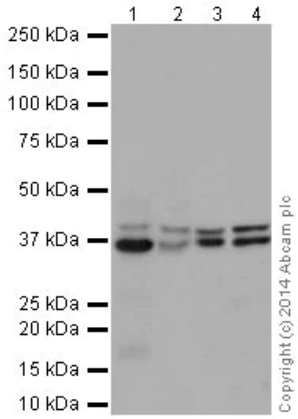
Secondary

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

Predicted band size: 39 kDa

Observed band size: 35 kDa, 39 kDa

Exposure time: 1min



Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] - BSA and Azide free (ab251324)

PCBP2/hnRNP E2 Western blot staining using rabbit Anti-PCBP2/hnRNP E2 antibody

This data was developed using ab200835, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-PCBP2/hnRNP E2 antibody [EPR14859(2)] (ab200835) at 1/1000 dilution

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Mouse heart lysate at 10 µg

Lane 3:
Rat heart lysate at 10 µg

Lane 4:
Rat spleen lysate at 10 µg

Secondary

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

Predicted band size: 39 kDa

Observed band size: 35 kDa, 39 kDa

Exposure time: 3min

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