abcam

ab92746

Anti-CCT2 antibody [EPR4084]

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	EPR4084
Purification technique	Affinity purification Protein A
Concentration	0.299 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Mouse
Dilution info	1/100 - 1/250
Notes	-

Species	Rat

Dilution info	1/100 - 1/250
Notes	-

Species	Human
Dilution info	1/100 - 1/250
Notes	-

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/10000 - 1/50000
Notes	-

Species	Rat
Dilution info	1/10000 - 1/50000
Notes	-

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	**For unpurified use at 1/100 - 1/250**

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Target data

See full target information CCT2

Function	Component of the chaperonin-containing T-complex (TRiC), a molecular chaperone complex that assists the folding of actin, tubulin and other proteins upon ATP hydrolysis (PubMed:25467444, PubMed:36493755, PubMed:35449234, PubMed:37193829). The TRiC complex mediates the folding of WRAP53/TCAB1, thereby regulating telomere maintenance (PubMed:25467444). As part of the TRiC complex may play a role in the assembly of BBSome, a complex involved in ciliogenesis regulating transports vesicles to the cilia (PubMed:20080638).

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	CCT2 also known as Chaperonin Containing TCP1 Subunit 2 is part of a group of proteins responsible for facilitating the correct folding of other proteins. It functions as a molecular chaperone and has a molecular weight of approximately

	58 kDa. CCT2 is expressed in many tissues with high levels detected in testis and brain tissues. This protein is integral to the chaperonin CCT (or TRiC) complex contributing to essential cellular processes through its role in protein homeostasis.
Biological function summary	CCT2 assists in the folding of cytoskeletal proteins like actin and tubulin which are vital for maintaining the structure and function of cells. As part of the CCT complex which consists of eight different subunits CCT2 plays a significant role in ensuring the proper assembly of multi-protein complexes. The activity of CCT2 is important for the prevention of aggregate formation which otherwise leads to cellular stress.
Pathways	CCT2 significantly influences the protein folding and degradation pathways. It participates in the cellular pathways that govern the proteostasis network collaborating with other chaperones to oversee protein quality control. Related proteins interacting with CCT2 within these pathways include other CCT complex components like CCT3 and CCT4 all contributing to maintaining cellular homeostasis and protecting cells from proteotoxic damage.
Associated diseases and disorders	CCT2 is connected to cancer and neurodegenerative diseases. Altered expression of CCT2 is linked to the progression of tumor growth interacting with proteins involved in cell cycle regulation and signaling such as p53. Additionally deficits in CCT2 function can exacerbate protein misfolding disorders like Alzheimer's disease where proteins like tau become aggregated contributing to the pathology. Efforts to understand CCT2's role in these conditions highlight the importance of protein homeostasis in maintaining health.

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

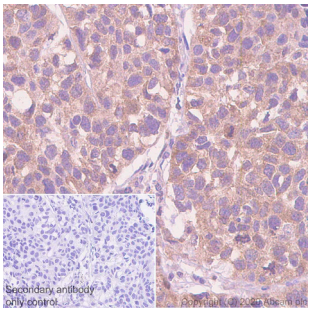
We do not recommend this combination. It is not covered by our product promise.

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.

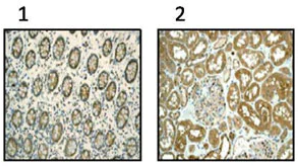
11 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CCT2 antibody [EPR4084] (ab92746)

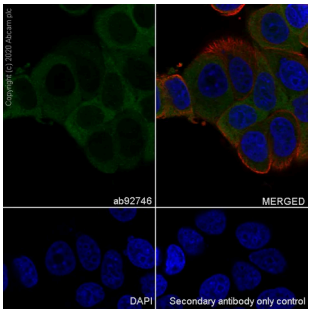
CCT2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CCT2 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human lung carcinoma tissue sections labeling CCT2 with purified ab92746 at 1/24000 dilution (0.012 µg/mL). Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 1 (pH 6.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CCT2 antibody [EPR4084] (ab92746)

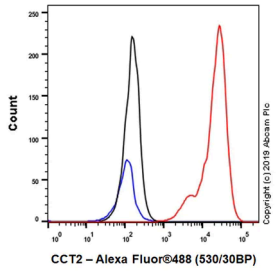
ab92746, unpurified, at a 1/100 dilution, staining CCT2 in formalin fixed, paraffin embedded (1) Human colon tissue and (2) Human kidney tissue by Immunohistochemistry. Detection: DAB staining.
Perform heat mediated antigen retrieval via the pressure cooker method before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-CCT2 antibody [EPR4084] (ab92746)

CCT2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CCT2 antibody

Immunocytochemistry/Immunofluorescence analysis of MCF7 (Human breast adenocarcinoma epithelial cell) cells labeling CCT2 with Purified ab92746 at 1:500 dilution (0.6 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

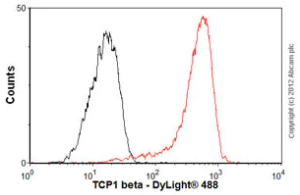


Flow Cytometry (Intracellular) - Anti-CCT2 antibody [EPR4084] (ab92746)

CCT2 Flow Cytometry (Intracellular) staining using rabbit Anti-CCT2 antibody

Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells, labeling CCT2 with Purified ab92746 at 1/30 dilution (10µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluorr® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG

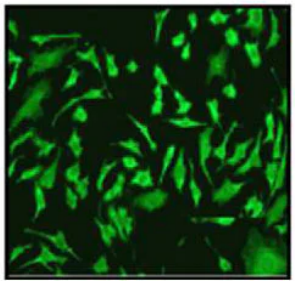
(Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Flow Cytometry (Intracellular) - Anti-CCT2 antibody [EPR4084] (ab92746)

CCT2 Flow Cytometry (Intracellular) staining using rabbit Anti-CCT2 antibody

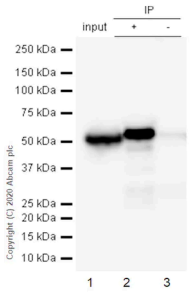
Overlay histogram showing HeLa cells stained with ab92746, unpurified, (red line), unpurified. The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab92746, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monclonal) (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Immunocytochemistry/ Immunofluorescence - Anti-CCT2 antibody [EPR4084] (ab92746)

CCT2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CCT2 antibody

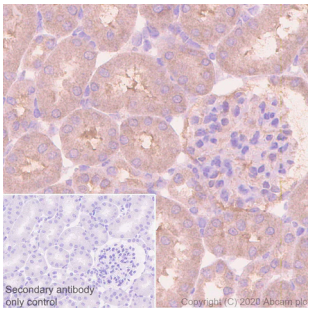
ab92746, unpurified, at a 1/100 dilution, staining CCT2 in HeLa cells by Immunofluorescence.



Immunoprecipitation - Anti-CCT2 antibody [EPR4084] (ab92746)

Purified ab92746 at 1:30 dilution (2µg) immunoprecipitating CCT2 in HeLa whole cell lysate.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg
Lane 2 (+): ab92746 + HeLa whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab92746 in HeLa whole cell lysate.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 57 kDa
All lanes:
Immunoprecipitation - Anti-CCT2 antibody [EPR4084] (ab92746)

Predicted band size: 57 kDa

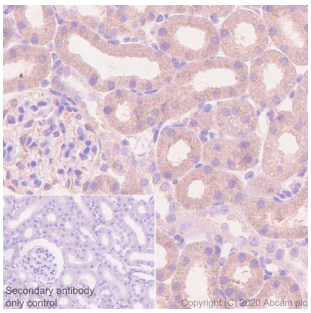


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CCT2 antibody [EPR4084] (ab92746)

CCT2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CCT2 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue sections labeling CCT2 with purified ab92746 at 1/24000 dilution (0.012 µg/mL). Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 1 (pH 6.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a

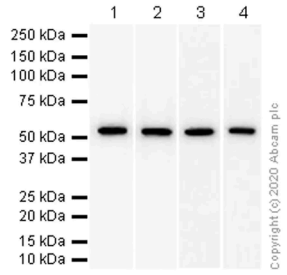
counterstain.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CCT2 antibody [EPR4084] (ab92746)

CCT2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CCT2 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat kidney tissue sections labeling CCT2 with purified ab92746 at 1/24000 dilution (0.012 µg/mL). Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 1 (pH 6.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-CCT2 antibody [EPR4084] (ab92746)

Blocking/Diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-CCT2 antibody [EPR4084] (ab92746) at 1/10000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 15 µg

Lane 2:
Human brain lysate at 15 µg

Lane 3:
Mouse brain lysate at 15 µg

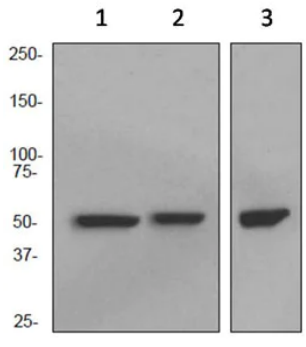
Lane 4:
Rat brain lysate at 15 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 57 kDa

Observed band size: 57 kDa



Western blot - Anti-CCT2 antibody [EPR4084] (ab92746)

CCT2 Western blot staining using rabbit Anti-CCT2 antibody

All lanes:
Western blot - Anti-CCT2 antibody [EPR4084] (ab92746) at 1/10000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
MCF-7 cell lysate at 10 µg

Lane 3:
Daudi cell lysate at 10 µg

Secondary

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

Predicted band size: 57 kDa

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