abcam

ab181216

Anti-CAND1 antibody [EPR14242(B)] - C-terminal

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR14242(B)
Purification technique	Affinity purification Protein A
Concentration	0.093 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	1/10000 - 1/50000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/20
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	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information CAND1

Function Key assembly factor of SCF (SKP1-CUL1-F-box protein) E3 ubiquitin ligase complexes that promotes the exchange of the substrate-recognition F-box subunit in SCF complexes, thereby playing a key role in the cellular repertoire of SCF complexes. Acts as a F-box protein exchange factor. The exchange activity of CAND1 is coupled with cycles of neddylation conjugation: in the deneddylated state, cullin-binding CAND1 binds CUL1-RBX1, increasing dissociation of the SCF complex and promoting exchange of the F-box protein. Probably plays a similar role in other cullin-RING E3 ubiquitin ligase complexes.

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	CAND1 also known as cullin-associated and neddylation-dissociated 1 is a scaffolding protein with a molecular mass of approximately 130 kDa. It is found in the cytoplasm and nucleus of eukaryotic cells. CAND1 plays a critical role in regulating the activity of cullin-RING ubiquitin ligases (CRLs) which are important for protein degradation processes. By interacting with neddylated cullin proteins CAND1 modulates the assembly and disassembly of these CRL complexes therefore influencing their activity.
Biological function summary	CAND1 mediates the dynamics of CRL complexes acting as a regulator of substrate specificity and turnover. CAND1 does not function alone; it is integral to a complex that includes cullin proteins and various CRL adaptors. This interaction ensures the right substrates are targeted for ubiquitination leading to proteasomal degradation. The ability of CAND1 to bind to cullin substrates is influenced by

	cullin neddylation and deneddylation cycles making it essential for the proper function of the ubiquitin-proteasome system.
Pathways	Studies have shown that CAND1 is important in the ubiquitin-proteasome pathway along with the neddylation pathway. Within these pathways it primarily interacts with proteins such as cullins 1 3 and 4 which are central to CRLs. By regulating these interactions CAND1 ensures that protein turnover is controlled which is important for processes like cell cycle progression and signal transduction.
Associated diseases and disorders	Research suggests a connection between CAND1 dysregulation and certain cancers as well as neurodegenerative disorders. In cancer aberrant regulation of CAND1 can lead to uncontrolled cell proliferation due to faulty protein degradation. In neurodegenerative diseases ineffective CAND1-mediated pathways may contribute to the accumulation of damaged proteins. Understanding CAND1's relationship with key proteins in these conditions such as p53 in cancer highlights its potential as a therapeutic target.

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

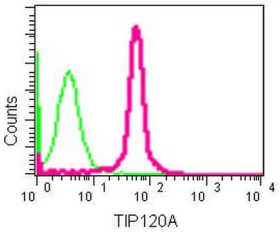
We do not recommend this combination. It is not covered by our product promise.

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.

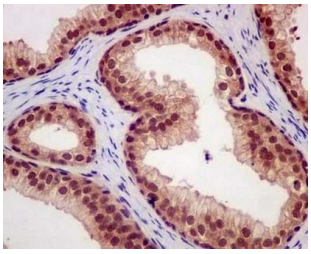
5 product images



Flow Cytometry (Intracellular) - Anti-CAND1 antibody [EPR14242(B)] - C-terminal (ab181216)

CAND1 Flow Cytometry (Intracellular) staining using rabbit Anti-CAND1 antibody

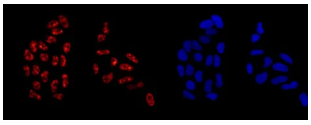
Intracellular flow cytometric analysis of Jurkat cells (2% paraformaldehyde-fixed) labeling CAND1 with ab181216 at 1/20 dilution (red)or a rabbit IgG (negative) (green), followed by Goat anti rabbit IgG (FITC) secondary at 1/150 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CAND1 antibody [EPR14242(B)] - C-terminal (ab181216)

CAND1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CAND1 antibody

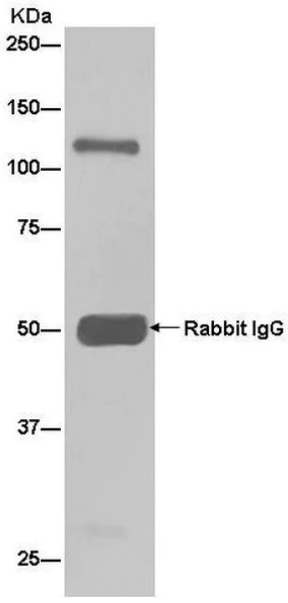
Immunohistochemical analysis of paraffin-embedded Human prostatic hyperplasia tissue labeling CAND1 with ab181216 at 1/100 dilution followed by pre-diluted HRP-conjugated secondary antibody and counter-stained with Hematoxylin.
Perform heat mediated antigen retrieval with EDTA buffer pH 9 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-CAND1 antibody [EPR14242(B)] - C-terminal (ab181216)

CAND1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CAND1 antibody

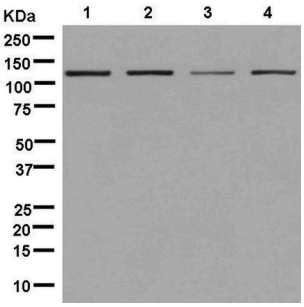
Immunofluorescent analysis of HeLa cells (-20°C Acetone-fixed) labeling CAND1 with ab181216 at 1/250 dilution followed by Goat anti rabbit IgG (Alexa Fluor® 555) at 1/200 dilution and counterstained with Dapi (blue).



Immunoprecipitation - Anti-CAND1 antibody [EPR14242(B)] - C-terminal (ab181216)

Western blot analysis of immunoprecipitation pellet from Hela cell lysate immunoprecipitated using ab181216 at 1/50 dilution.
Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution.
All lanes:
Immunoprecipitation - Anti-CAND1 antibody [EPR14242(B)] - C-terminal (ab181216)

Predicted band size: 136 kDa



Western blot - Anti-CAND1 antibody [EPR14242(B)] - C-terminal (ab181216)

CAND1 Western blot staining using rabbit Anti-CAND1 antibody

All lanes:
Western blot - Anti-CAND1 antibody [EPR14242(B)] - C-terminal (ab181216) at 1/50000 dilution

Lane 1:
293T cell lysate at 20 µg

Lane 2:
HeLa cell lysate at 20 µg

Lane 3:
Jurkat cell lysate at 20 µg

Lane 4:
Saos-2 cell lysate at 20 µg

Secondary

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

Predicted band size: 136 kDa

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