abcam

ab10538

Anti-Cdc27 antibody [AF3.1]

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human CDC27 aa 800 to C-terminus conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link P30260
Clone number	AF3.1
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Expected

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

WB

Tested

Species	Mouse
Dilution info	1-2 µg/mL
Notes	-

Species	Human
Dilution info	1-2 µg/mL
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Target data

See full target information CDC27

Function	Component of the anaphase promoting complex/cyclosome (APC/C), a cell cycle-regulated E3 ubiquitin ligase that controls progression through mitosis and the G1 phase of the cell cycle (PubMed:18485873). The APC/C complex acts by mediating ubiquitination and subsequent degradation of target proteins: it mainly mediates the formation of 'Lys-11'-linked polyubiquitin chains and, to a lower extent, the formation of 'Lys-48'- and 'Lys-63'-linked polyubiquitin chains (PubMed:18485873). The APC/C complex catalyzes assembly of branched 'Lys-11'-/'Lys-48'-linked branched ubiquitin chains on target proteins (PubMed:29033132).

Storage

Shipped at conditions	Blue Ice
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

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Cdc27 also known as cell division cycle 27 or APC3 plays an important role in cell cycle regulation. It weighs approximately 92 kDa and is expressed in various tissues although it is found predominantly within the nucleus of proliferating cells. Cdc27 is a component of the anaphase-promoting complex/cyclosome (APC/C) which is vital for progression through mitosis and the G1 phase of the cell cycle by targeting specific proteins for degradation.
Biological function summary	Cdc27 serves as an essential part of the APC/C a large E3 ubiquitin ligase complex. By forming the scaffold for other subunits Cdc27 helps regulate the ubiquitination and subsequent degradation of mitotic cyclins and other proteins involved in cell cycle progression. The interaction of Cdc27 with other proteins like Cdc16 and Cdc23 stabilizes the APC/C complex ensuring its proper function.
Pathways	Cdc27 participates actively in the cell cycle especially during the G2/M transition and mitotic exit. It is involved in the ubiquitin-proteasome pathway where it intersects with proteins like securin and cyclin B1. These interactions allow Cdc27 to mediate the transition between cell cycle phases and support chromosome segregation.

Associated diseases and disorders	Disruptions in Cdc27 expression or function are linked to cancer development particularly breast and colorectal cancers. Abnormal activity in the APC/C complex can lead to uncontrolled cell proliferation. Cdc27 works alongside Cdh1 another APC/C co-activator protein highlighting its significance in maintaining cell cycle fidelity.unger.

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

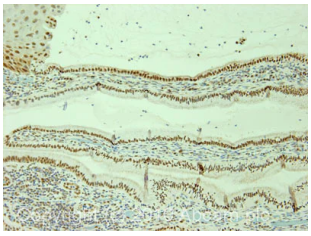
We do not recommend this combination. It is not covered by our product promise.

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.

3 product images

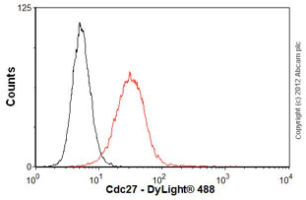


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cdc27 antibody [AF3.1] (ab10538)

Cdc27 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-Cdc27 antibody

IHC image of ab10538 staining in human cervical carcinoma formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab10538, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

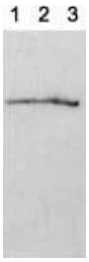
For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Flow Cytometry - Anti-Cdc27 antibody [AF3.1] (ab10538)

Cdc27 Flow Cytometry staining using mouse Anti-Cdc27 antibody

Overlay histogram showing K562 cells stained with ab10538 (red line). The cells were fixed with 4% paraformaldehyde (10 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 (ab10538, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (ab91366, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in K562 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Western blot - Anti-Cdc27 antibody [AF3.1] (ab10538)

Cdc27 Western blot staining using mouse Anti-Cdc27 antibody

We have no more information on how this image was prepared by the academic who produced the antibody.
All lanes:
Western blot - Anti-Cdc27 antibody [AF3.1] (ab10538)

Lane 1:
HeLa cell lysate

Lane 2:
293 cell lysate

Lane 3:
Mouse myeloid cell lysate

Predicted band size: 91 kDa

Observed band size: 80 kDa

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