abcam

ab166917

Anti-Cullin 2/CUL-2 antibody [EPR3104(2)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 50% Tissue culture supernatant, 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	EPR3104(2)
Purification technique	Affinity purification Protein A
Concentration	1.005 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

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	1/1000 - 1/10000
Notes	-

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

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

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

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

Target data

See full target information CUL2

Function

Core component of multiple cullin-RING-based ECS (ElonginB/C-CUL2/5-SOCS-box protein) E3 ubiquitin-protein ligase complexes, which mediate the ubiquitination of target proteins (PubMed:11384984, PubMed:26138980, PubMed:29775578, PubMed:29779948, PubMed:37844242, PubMed:38326650). CUL2 serves as a rigid scaffold in the complex and may contribute to catalysis through positioning of the substrate and the E2 ubiquitin-conjugating enzyme (PubMed:10973499, PubMed:11384984, PubMed:12609982, PubMed:24076655, PubMed:9122164, PubMed:37844242, PubMed:38326650). The E3 ubiquitin-protein ligase activity of the complex is dependent on the neddylation of the cullin subunit and is inhibited by the association of the deneddylated cullin subunit with TIP120A/CAND1 (PubMed:12609982, PubMed:24076655, PubMed:27565346, PubMed:38326650). The functional specificity of the ECS complex depends on the substrate recognition component (PubMed:10973499, PubMed:26138980, PubMed:29775578, PubMed:29779948, PubMed:9122164, PubMed:38326650). ECS(VHL) mediates the ubiquitination of hypoxia-inducible factor (HIF) (PubMed:10973499, PubMed:9122164). A number of ECS complexes (containing either KLHDC2, KLHDC3, KLHDC10, APPBP2, FEM1A, FEM1B or FEM1C as substrate-recognition component) are part of the DesCEND (destruction via C-end degrons) pathway, which recognizes a C-degron located at the extreme C terminus of target proteins, leading to their ubiquitination and degradation (PubMed:26138980, PubMed:29775578, PubMed:29779948, PubMed:37844242). ECS complexes and ARIH1 collaborate in tandem to mediate ubiquitination of target proteins (PubMed:27565346). ECS(LRR1) ubiquitinates MCM7 and promotes CMG replisome disassembly by VCP and chromatin extraction during S-phase (By similarity).

Storage

Shipped at conditions	Conditional Ambient
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.

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

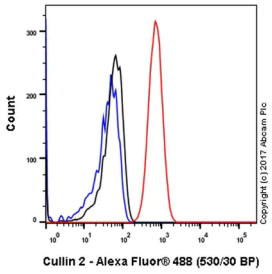
We do not recommend this combination. It is not covered by our product promise.

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.

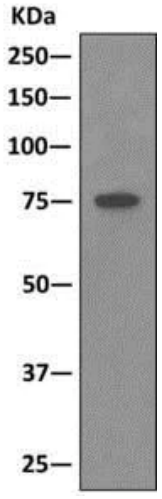
5 product images



Flow Cytometry (Intracellular) - Anti-Cullin 2/CUL-2 antibody [EPR3104(2)] (ab166917)

Cullin 2/CUL-2 Flow Cytometry (Intracellular) staining using rabbit Anti-Cullin 2/CUL-2 antibody

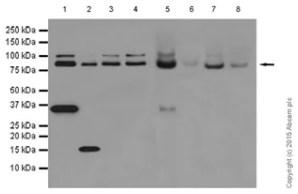
Intracellular Flow Cytometry analysis of 293T (Human embryonic kidney epithelial cell) cells labeling Cullin 2/CUL-2 (red) with ab166917 at a 1/100 dilution. Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (ab172730). Blue (unlabeled control) - Cells without incubation with the primary and secondary antibodies.



Immunoprecipitation - Anti-Cullin 2/CUL-2 antibody [EPR3104(2)] (ab166917)

Western blot analysis of an immunoprecipitation pellet from Raji cell lysate labeling Cullin 2/CUL-2 with ab166917 which was used at 1/10 dilution for immunoprecipitation.
Secondary antibody used was an HRP-conjugated anti-rabbit IgG preferentially detecting the non-reduced form of rabbit IgG.
All lanes:
Immunoprecipitation - Anti-Cullin 2/CUL-2 antibody [EPR3104(2)] (ab166917)

Predicted band size: 87 kDa



Western blot - Anti-Cullin 2/CUL-2 antibody [EPR3104(2)] (ab166917)

Blocking and Diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Cullin 2/CUL-2 antibody [EPR3104(2)] (ab166917) at 1/2000 dilution

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Mouse heart lysate at 10 µg

Lane 3:
Mouse kidney lysate at 10 µg

Lane 4:

Mouse spleen lysate at 10 µg

Lane 5:
Rat brain lysate at 10 µg

Lane 6:
Rat heart lysate at 10 µg

Lane 7:
Rat kidney lysate at 10 µg

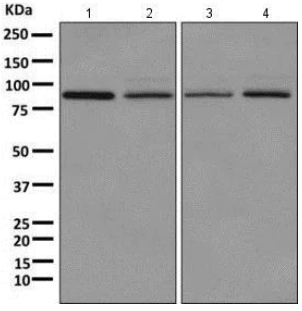
Lane 8:
Rat spleen lysate at 10 µg

Secondary

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

Predicted band size: 87 kDa

Exposure time: 3min



Western blot - Anti-Cullin 2/CUL-2 antibody [EPR3104(2)] (ab166917)

All lanes:
Western blot - Anti-Cullin 2/CUL-2 antibody [EPR3104(2)] (ab166917) at 1/1000 dilution

Lane 1:
PC3 cell lysate at 10 µg

Lane 2:
293T cell lysate at 10 µg

Lane 3:
HeLa cell lysate at 10 µg

Lane 4:
Raji cell lysate at 10 µg

Predicted band size: 87 kDa

C

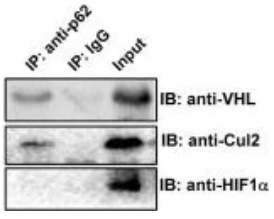


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Western blot - Anti-Cullin 2/CUL-2 antibody [EPR3104(2)] (ab166917)

Cullin 2/CUL-2 western blot using anti-Cullin 2/CUL-2 antibody [EPR3104(2)] ab166917. Publication image and figure legend from Chen, K., Zeng, J., et al., 2016, J Cell Sci, PubMed 26743088.

ab166917 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 ab166917 please see the product overview.

p62 interacts with the VHL E3 ubiquitin ligase complex. (A) p62 interacts with CUL2. Co-transfection of Myc–CUL2 into HEK293T cells was performed, together with Flag–VHL or Flag–p62. At 48 h after transfection, the whole-cell lysates were extracted for co-immunoprecipitation with an anti-Flag antibody, followed by probing for Myc. IB, immunoblot; IP, immunoprecipitation. (B) HEK293T cells were co-transfected with HA–p62 together with Flag–VHL, Flag–CUL2, Flag–elonginB, Flag–elonginC, Flag–HIF1α or psi-Flag. At 48 h after transfection, the whole-cell lysates

were extracted for co-immunoprecipitation with an antibody against Flag, followed by probing with an anti-HA antibody. (C) p62 interacts with VHL and CUL2 in vivo. The HEK293T cell lysates were immunoprecipitated (IP) with a control antibody (rabbit IgG) or an anti-p62 antibody, and analyzed by immunoblot (IB) with antibodies against VHL, CUL2 or HIF1α. (D) Domain structure and deletion constructs of VHL (left) and p62 (right). Numbers refer to amino acid residues. (E) Mapping of the p62 binding region of VHL. HEK293T cells were transiently transfected with HA–p62 along with various Flag-tagged VHL deletion mutants, as indicated. The cell lysates were immunoprecipitated with an anti-Flag antibody and immunoblotted with an anti-HA antibody. (F) Mapping of the VHL- and CUL2-binding region of p62. HEK293T cells were transiently transfected with HA–VHL and Myc–CUL2 along with various Flag-tagged p62 deletion mutants, as indicated. The cell lysates were immunoprecipitated with anti-Flag antibody and immunoblotted with anti--HA and anti-Myc antibodies.

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