abcam

ab75817

Anti-Cullin 1/CUL-1 antibody [EPR3103Y]

Recombinant | RabMAb | 20ul selling size

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	EPR3103Y
Purification technique	Affinity purification Protein A
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/250
Notes	-

Expected

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

IP

Tested

Species	Human
Dilution info	1/10 - 1/50
Notes	-

Expected

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

WB

Tested

Species	Rat
Dilution info	1/1000
Notes	**For unpurified, use 1/2500 - 1/5000.**

Species	Human
Dilution info	1/1000
Notes	**For unpurified, use 1/2500 - 1/5000.**

Species	Mouse
Dilution info	1/1000
Notes	**For unpurified, use 1/2500 - 1/5000.**

ICC/IF

Tested

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

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/20
Notes	-

Expected

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

Target data

See full target information CUL1

Function Core component of multiple cullin-RING-based SCF (SKP1-CUL1-F-box protein) E3 ubiquitin-protein ligase complexes, which mediate the ubiquitination of proteins involved in cell cycle progression, signal transduction and transcription. SCF complexes and ARIH1 collaborate in tandem to mediate ubiquitination of target proteins (PubMed:22017875, PubMed:22017877, PubMed:27565346). In the SCF complex, serves as a rigid scaffold that organizes the SKP1-F-box protein and RBX1 subunits. May contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme (PubMed:38326650). The E3 ubiquitin-protein ligase activity of the complex is dependent on the neddylation of the cullin subunit and exchange of the substrate recognition component is mediated by TIP120A/CAND1

(PubMed:12609982, PubMed:38326650). The functional specificity of the SCF complex depends on the F-box protein as substrate recognition component (PubMed:38326650). SCF(BTRC) and SCF(FBXW11) direct ubiquitination of CTNNB1 and participate in Wnt signaling. SCF(FBXW11) directs ubiquitination of phosphorylated NFKBIA. SCF(BTRC) directs ubiquitination of NFKBIB, NFKBIE, ATF4, SMAD3, SMAD4, CDC25A, FBXO5 and probably NFKB2. SCF(BTRC) and/or SCF(FBXW11) direct ubiquitination of CEP68 (PubMed:25503564, PubMed:25704143). SCF(SKP2) directs ubiquitination of phosphorylated CDKN1B/p27kip and is involved in regulation of G1/S transition. SCF(SKP2) directs ubiquitination of ORC1, CDT1, RBL2, ELF4, CDKN1A, RAG2, FOXO1A, and probably MYC and TAL1. SCF(FBXW7) directs ubiquitination of CCNE1, NOTCH1 released notch intracellular domain (NICD), and probably PSEN1. SCF(FBXW2) directs ubiquitination of GCM1. SCF(FBXO32) directs ubiquitination of MYOD1. SCF(FBXO7) directs ubiquitination of BIRC2 and DLGAP5. SCF(FBXO33) directs ubiquitination of YBX1. SCF(FBXO1) directs ubiquitination of BCL6 and DTL but does not seem to direct ubiquitination of TP53. SCF(BTRC) mediates the ubiquitination of NFKBIA at 'Lys-21' and 'Lys-22'; the degradation frees the associated NFKB1-RELA dimer to translocate into the nucleus and to activate transcription. SCF(CCNF) directs ubiquitination of CCP110. SCF(FBXL3) and SCF(FBXL21) direct ubiquitination of CRY1 and CRY2. SCF(FBXO9) directs ubiquitination of TTI1 and TELO2. SCF(FBXO10) directs ubiquitination of BCL2. Neddylated CUL1-RBX1 ubiquitinates p53/TP53 recruited by Cul7-RING(FBXW8) complex (PubMed:35982156). SCF(BTRC) directs 'Lys-48'-linked ubiquitination of UBR2 in the T-cell receptor signaling pathway (PubMed:38225265). The SCF(FBXO31) protein ligase complex specifically mediates the ubiquitination of proteins amidated at their C-terminus in response to oxidative stress (PubMed:39880951).

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	Stable for 12 months at -20°C

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.

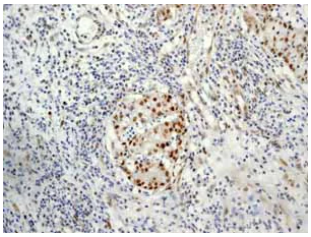
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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12 product images

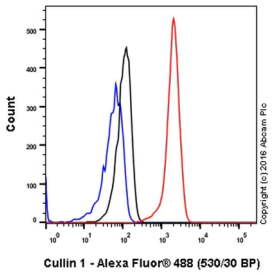


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

Cullin 1/CUL-1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cullin 1/CUL-1 antibody

Unpurified ab75817 showing positive staining in human Ovarian carcinoma tissue.

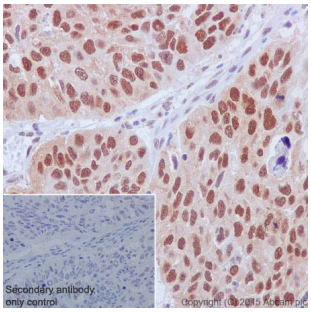
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

Cullin 1/CUL-1 Flow Cytometry (Intracellular) staining using rabbit Anti-Cullin 1/CUL-1 antibody

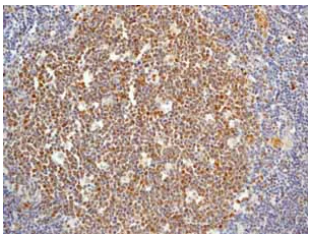
Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling Cullin 1/CUL-1 with purified ab75817 at 1/20 dilution (10ug/mL) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluorr® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

Cullin 1/CUL-1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cullin 1/CUL-1 antibody

Immunohistochemical staining of paraffin embedded human lung carcinoma with purified ab75817 at a working dilution of 1/50. The secondary antibody used is HRP goat anti-rabbit IgG H&L (ab97051) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.

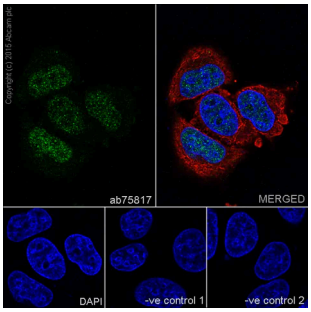


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

Cullin 1/CUL-1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cullin 1/CUL-1 antibody

Unpurified ab75817 showing positive staining in Normal human tonsil tissue.

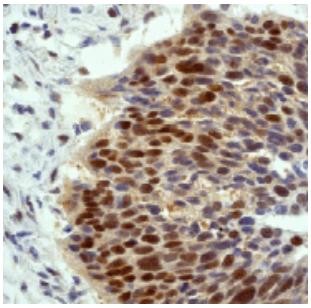
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

Cullin 1/CUL-1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cullin 1/CUL-1 antibody

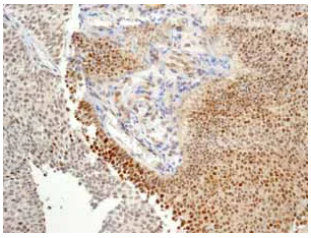
Immunofluorescence staining of HeLa cells with purified ab75817 at a working dilution of 1/1000, counter-stained with DAPI. The secondary antibody was Alexa Fluor® 488 goat anti-rabbit (ab150077), used at a dilution of 1/1000. ab7291, a mouse anti-tubulin antibody (1/1000), was used to stain tubulin along with ab150120 (Alexa Fluor® 594 goat anti-mouse, 1/1000), shown in the top right hand panel. The cells were fixed in 4% PFA and permeabilized using 0.1% Triton X 100. The negative controls are shown in bottom middle and right hand panels - for negative control 1, purified ab75817 was used at a dilution of 1/500 followed by an Alexa Fluor® 594 goat anti-mouse antibody (ab150120) at a dilution of 1/500. For negative control 2, ab7291 (mouse anti-tubulin) was used at a dilution of 1/500 followed by an Alexa Fluor® 488 goat anti-rabbit antibody (ab150077) at a dilution of 1/400.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

Cullin 1/CUL-1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cullin 1/CUL-1 antibody

Unpurified ab75817 at 1/100 dilution staining Cullin 1/CUL-1 in human cervical carcinoma by Immunohistochemistry, Paraffin-embedded tissue.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

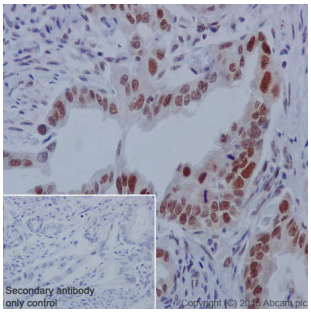


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

Cullin 1/CUL-1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cullin 1/CUL-1 antibody

Unpurified ab75817 showing positive staining in human Urinary bladder transitional carcinoma tissue.

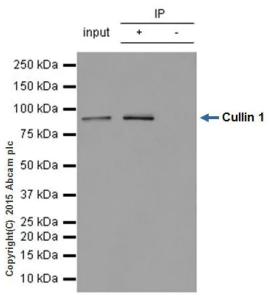
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

Cullin 1/CUL-1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cullin 1/CUL-1 antibody

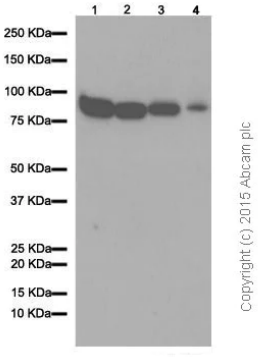
Immunohistochemical staining of paraffin embedded human cervical carcinoma with purified ab75817 at a working dilution of 1/50. The secondary antibody used is HRP goat anti-rabbit IgG H&L (ab97051) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.



Immunoprecipitation - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

ab75817 (purified) at 1/120 immunoprecipitating Cullin 1 in 10 µg MCF7 whole cell lysate (Lanes 1 and 2, observed at 90 kDa). Lane 3 - PBS. For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/1500 dilution. Blocking buffer and concentration: 5% NFDM/TBST Dilution buffer and concentration: 5% NFDM/TBST
All lanes:
Immunoprecipitation - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

Predicted band size: 90 kDa



Western blot - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
MCF7 cell lysate at 10 µg

Lane 3:
A549 cell lysate at 10 µg

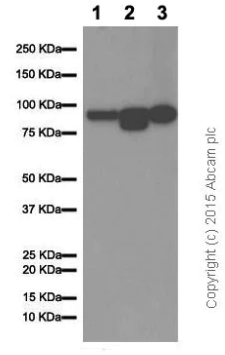
Lane 4:
MDA-MB-435 cell lysate at 10 µg

Secondary

All lanes:
HRP goat anti-rabbit IgG (H+L) at 1/50000 dilution

Predicted band size: 47 kDa, 90 kDa

Observed band size: 49 kDa, 90 kDa



Western blot - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817) at 1/1000 dilution

Lane 1:
PC-12 cell lysate at 10 µg

Lane 2:
NIH/3T3 cell lysate at 10 µg

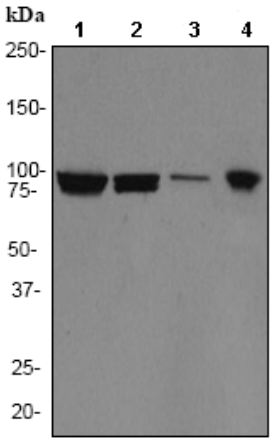
Lane 3:
mouse brain cell lysate at 10 µg

Secondary

All lanes:
HRP goat anti-rabbit IgG (H+L) at 1/50000 dilution

Predicted band size: 90 kDa

Observed band size: 90 kDa



Western blot - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

All lanes:
Western blot - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817) at 1/5000 dilution

Lane 1:
HeLa cell lysate at 10 µg

Lane 2:
MCF7 cell lysate at 10 µg

Lane 3:
A549 cell lysate at 10 µg

Lane 4:
PC12 cell lysate at 10 µg

Secondary

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

Predicted band size: 90 kDa

Observed band size: 90 kDa

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