abcam

Product datasheet

Anti-Cullin 1/CUL-1 antibody [EPR3103Y] ab75817

Recombinant RabMAb

25 References 13 Images

Overview

Product name	Anti-Cullin 1/CUL-1 antibody [EPR3103Y]
Description	Rabbit monoclonal [EPR3103Y] to Cullin 1/CUL-1
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), ICC/IF, WB, IP, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Human Cullin 1/CUL-1 aa 750 to the C-terminus (C terminal). The exact sequence is proprietary.
Positive control	HeLa, MCF7, A549 and PC12 cell lysates; human cervical carcinoma tissue.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR3103Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab75817 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/20.
ICC/IF		1/100 - 1/250.
WB		1/1000. Detects a band of approximately 90 kDa (predicted molecular weight: 90 kDa). **For unpurified, use 1/2500 - 1/5000.**
IP		1/10 - 1/50.
IHC-P		1/50 - 1/250. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Target

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. 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. 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. The functional specificity of the SCF complex depends on the F-box protein as substrate recognition component. 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(SKP2) directs ubiquination of phosphorylated CDKN1B/p27kip and is involved in regulation of G1/S transition. SCF(SKP2) directs ubiquination of ORC1, CDT1, RBL2, ELF4, CDKN1A, RAG2, FOXO1A, and probably MYC and TAL1. SCF(FBXW7) directs ubiquitination of cyclin E, 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(FBXO11) 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(Cyclin F) directs ubiquitination of CP110.

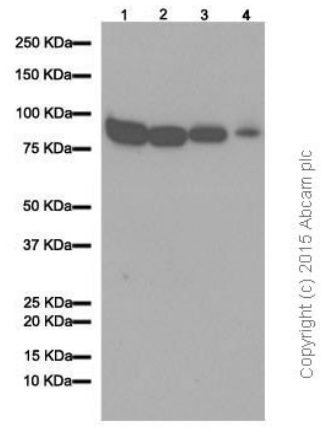
Tissue specificity Expressed in lung fibroblasts.

Pathway Protein modification; protein ubiquitination.

Sequence similarities Belongs to the cullin family.

Post-translational modifications Neddylated; which enhances the ubiquitination activity of SCF. Deneddylated via its interaction with the COP9 signalosome (CSN) complex. Deneddylated by Epstein-Barr virus BPLF1 leading to a S-phase-like environment that is required for efficient replication of the viral genome.

Images



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

All lanes : Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817) at 1/1000 dilution (purified)

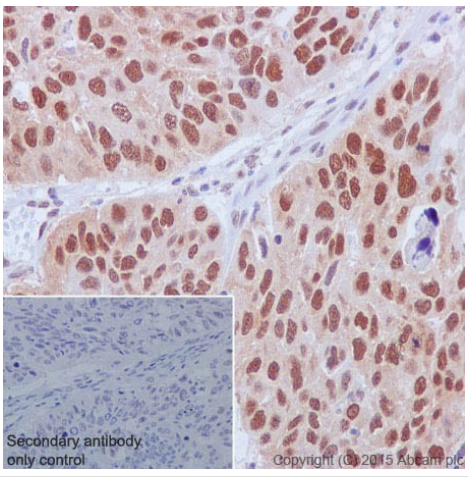
Lane 1 : HeLa cell lysate
Lane 2 : MCF7 cell lysate
Lane 3 : A549 cell lysate
Lane 4 : MDA-MB-435 cell lysate

Lysates/proteins at 10 µg per lane.

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

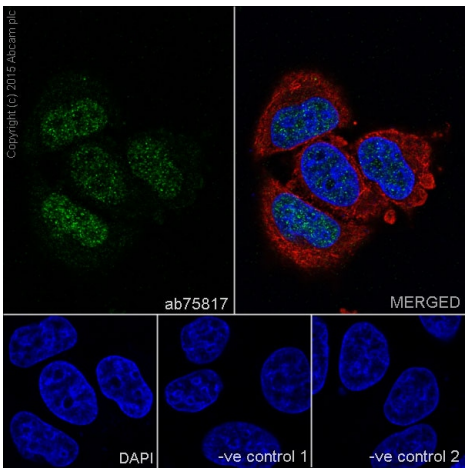
Predicted band size: 90 kDa
Observed band size: 90 kDa

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST



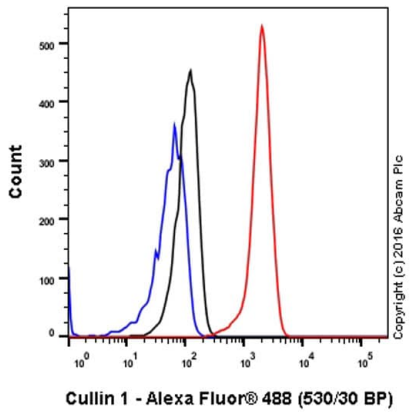
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

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.



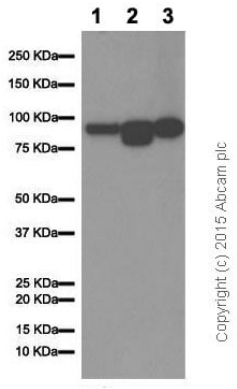
Immunocytochemistry/ Immunofluorescence - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

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.



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

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 Fluor®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.



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

All lanes : Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817) at 1/1000 dilution (purified)

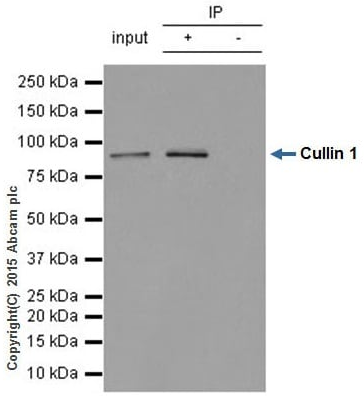
Lane 1 : PC-12 cell lysate
Lane 2 : NIH/3T3 cell lysate
Lane 3 : mouse brain cell lysate

Lysates/proteins at 10 µg per lane.

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

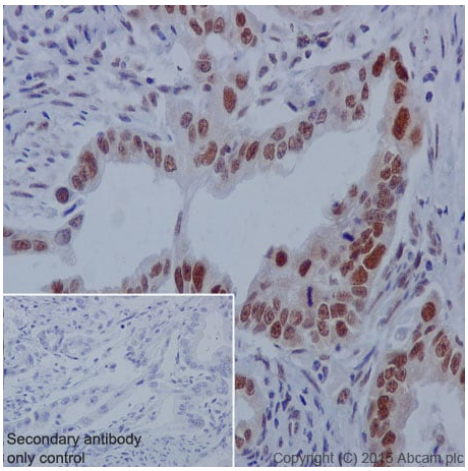
Predicted band size: 90 kDa
Observed band size: 90 kDa

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST



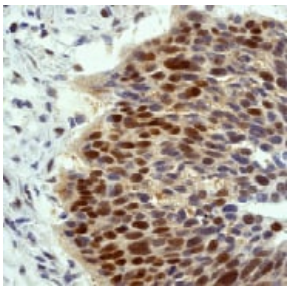
Immunoprecipitation - Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817)

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



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

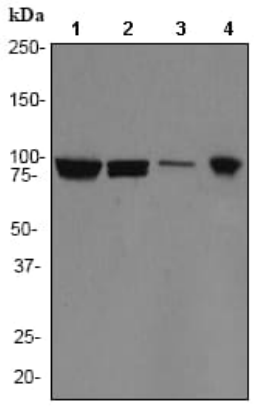
Immunohistochemical staining of paraffin embedded human cervical carcinoma with purified ab75817 at a working dilution of 1/50. The secondary antibody used is HRP goat anti-rabbit IgG H&L (**ab97051**) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA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



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

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.



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

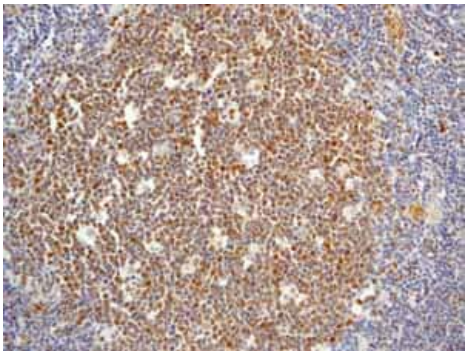
All lanes : Anti-Cullin 1/CUL-1 antibody [EPR3103Y] (ab75817) at 1/5000 dilution (unpurified)

Lane 1 : HeLa cell lysate
Lane 2 : MCF7 cell lysate
Lane 3 : A549 cell lysate
Lane 4 : PC12 cell lysate

Lysates/proteins at 10 µg per lane.

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

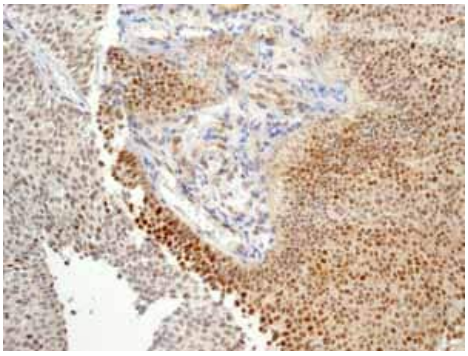
Predicted band size: 90 kDa
Observed band size: 90 kDa



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

Unpurified ab75817 showing positive staining in Normal human tonsil tissue.

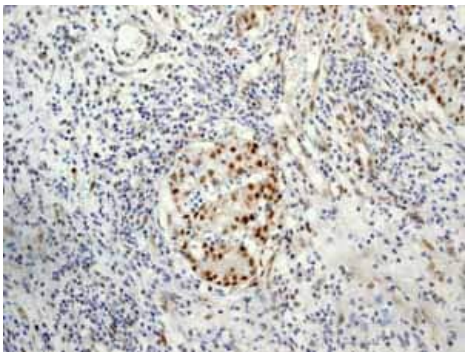
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



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

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

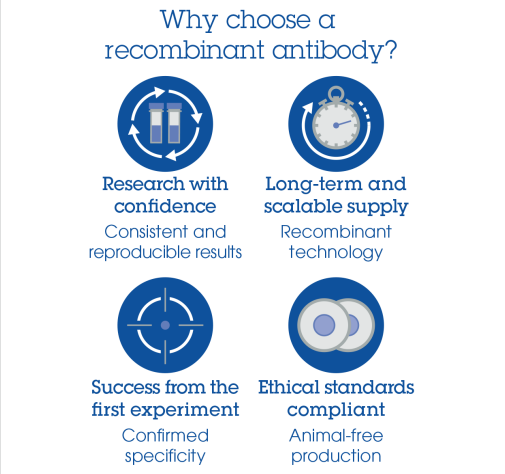
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



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

Unpurified ab75817 showing positive staining in human Ovarian carcinoma tissue.

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



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

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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