

Product datasheet

Anti-Dcp2 antibody ab28658

[4 References](#) [4 Images](#)

Overview

Product name	Anti-Dcp2 antibody
Description	Rabbit polyclonal to Dcp2
Host species	Rabbit
Tested applications	Suitable for: ICC/IF, WB, IHC-P, EMSA, IP
Species reactivity	Reacts with: Mouse, Human
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 300 - 400 of Human Dcp2. Read Abcam's proprietary immunogen policy (Peptide available as ab30458 .)
Positive control	This antibody gave a positive signal in the following Human whole cell lysates: HeLa, Jurkat, HEK293. This antibody gave a positive signal in the following Mouse whole cell lysate: NIH 3T3 (data not shown).

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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab28658** in the following tested applications.

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

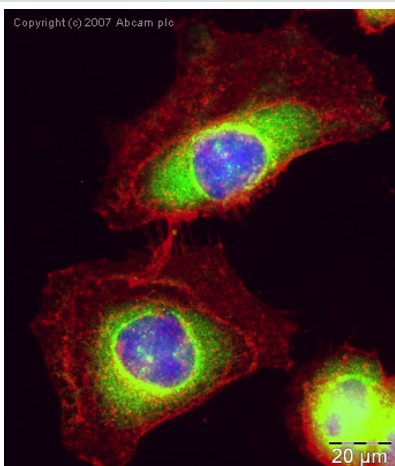
Application	Abreviews	Notes
ICC/IF		Use a concentration of 1 µg/ml.

Application	Abreviews	Notes
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 52 kDa (predicted molecular weight: 48.4 kDa).
IHC-P		1/35. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
EMSA		Use at an assay dependent concentration. PubMed: 20691152
IP		Use at an assay dependent concentration.

Target

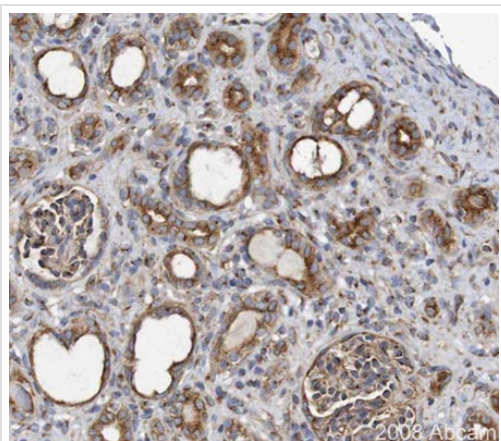
Function	Necessary for the degradation of mRNAs, both in normal mRNA turnover and in nonsense-mediated mRNA decay. Plays a role in replication-dependent histone mRNA degradation. Removes the 7-methyl guanine cap structure from mRNA molecules, yielding a 5'-phosphorylated mRNA fragment and 7m-GDP. Has higher activity towards mRNAs that lack a poly(A) tail. Has no activity towards a cap structure lacking a RNA moiety.
Sequence similarities	Belongs to the Nudix hydrolase family. DCP2 subfamily. Contains 1 nudix hydrolase domain.
Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR.
Cellular localization	Cytoplasm > P-body. Nucleus. Predominantly cytoplasmic, in processing bodies (PB). A minor amount is nuclear.

Images



ICC/IF image of ab28658 stained human HeLa cells. The cells were PFA fixed (10 min), permeabilised in TBS-T (20 min) and incubated with the antibody (ab28658, 1µg/ml) for 1h at room temperature. 1%BSA / 10% normal goat serum / 0.3M glycine was used to quench autofluorescence and block non-specific protein-protein interactions. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red). DAPI was used to stain the cell nuclei (blue).

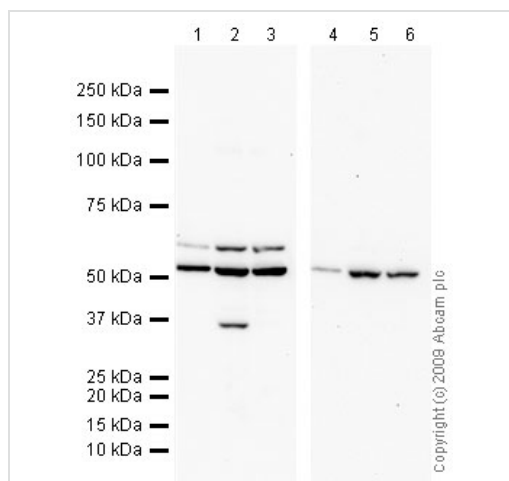
Immunocytochemistry/ Immunofluorescence - Anti-Dcp2 antibody (ab28658)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dcp2 antibody (ab28658)

Image courtesy of [Human Protein Atlas](http://www.proteinatlas.org)

ab28658 staining Dcp2 in paraffin embedded human kidney. Kidney tissue sections (4 μ m) were incubated with ab28658 (1/35 dilution) for 30 minutes at room temperature. Antigen retrieval was performed by heat induction in citrate buffer pH 6. ab28658 was tested in a tissue microarray (TMA) containing a wide range of normal and cancer tissues as well as a cell microarray consisting of a range of commonly used, well characterised human cell lines. Further results for this antibody can be found at www.proteinatlas.org



Western blot - Anti-Dcp2 antibody (ab28658)

All lanes : Anti-Dcp2 antibody (ab28658) at 1 μ g/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 2 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate

Lane 3 : HEK293 (Human embryonic kidney cell line) Whole Cell Lysate

Lane 4 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate with Human Dcp2 peptide (ab30458) at 1 μ g/ml

Lane 5 : Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate with Human Dcp2 peptide (ab30458) at 1 μ g/ml

Lane 6 : HEK293 (Human embryonic kidney cell line) Whole Cell Lysate with Human Dcp2 peptide (ab30458) at 1 μ g/ml

Lysates/proteins at 10 μ g per lane.

Secondary

All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Predicted band size: 48.4 kDa

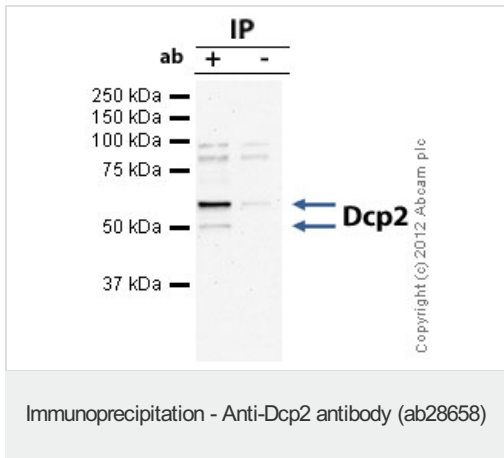
Observed band size: 52,58 kDa

[why is the actual band size different from the predicted?](#)

Additional bands at: 35 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 10 minutes

Dcp2 contains a number of potential phosphorylation sites (Swiss Prot data) which may explain its migration at a higher molecular weight than predicted.



Dcp2 was immunoprecipitated using 0.5mg Jurkat whole cell extract, 5µg of Rabbit polyclonal to Dcp2 and 50µl of protein G magnetic beads (+). No antibody was added to the control (-). The antibody was incubated under agitation with Protein G beads for 10min, Jurkat whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.

Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab28658.

Secondary: Mouse monoclonal [SB62a] Secondary Antibody to Rabbit IgG light chain (HRP) (ab99697).

Band: 52,58kDa: Dcp2.

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