

## Product datasheet

# Anti-Dcp2 antibody ab28658

4 References 4 Images

### Overview

<b>Product name</b>	Anti-Dcp2 antibody
<b>Description</b>	Rabbit polyclonal to Dcp2
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, WB, IHC-P, EMSA, IP
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human
<b>Immunogen</b>	Synthetic peptide conjugated to KLH derived from within residues 300 - 400 of Human Dcp2. Read Abcam's proprietary immunogen policy (Peptide available as <a href="#">ab30458</a> .)
<b>Positive control</b>	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

<b>Form</b>	Liquid
<b>Storage instructions</b>	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.
<b>Storage buffer</b>	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	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.

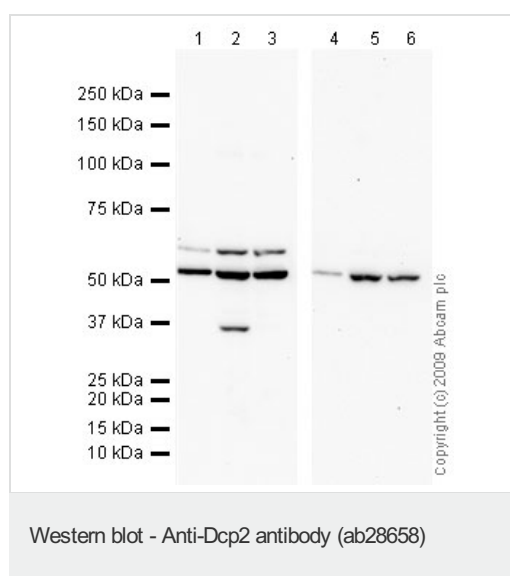
Application	Abreviews	Notes
ICC/IF		Use a concentration of 1 µg/ml.

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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

<b>Function</b>	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.
<b>Sequence similarities</b>	Belongs to the Nudix hydrolase family. DCP2 subfamily. Contains 1 nudix hydrolase domain.
<b>Post-translational modifications</b>	Phosphorylated upon DNA damage, probably by ATM or ATR.
<b>Cellular localization</b>	Cytoplasm > P-body. Nucleus. Predominantly cytoplasmic, in processing bodies (PB). A minor amount is nuclear.

## Images



**All lanes :** Anti-Dcp2 antibody (ab28658) at 1 µg/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 µg/ml

**Lane 5 :** Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate with Human Dcp2 peptide ([ab30458](#)) at 1 µg/ml

**Lane 6 :** HEK293 (Human embryonic kidney cell line) Whole Cell Lysate with Human Dcp2 peptide ([ab30458](#)) at 1 µg/ml

Lysates/proteins at 10 µg 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

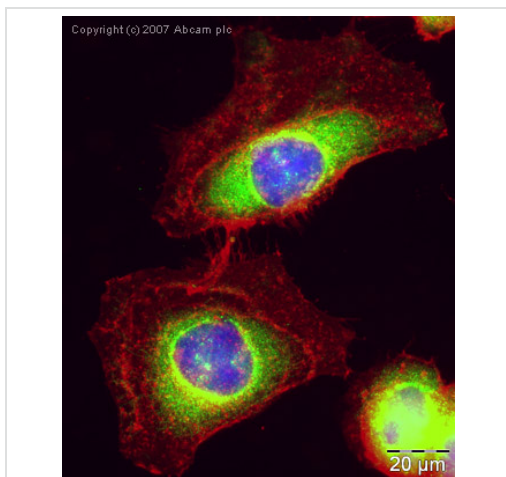
**Observed band size:** 52,58 kDa

[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.

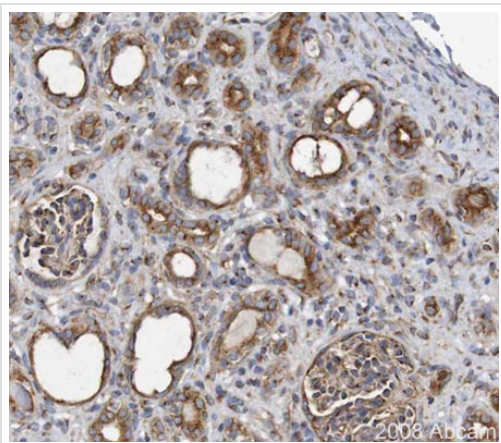
**Exposure time:** 10 minutes

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



Immunocytochemistry/ Immunofluorescence - Anti-Dcp2 antibody (ab28658)

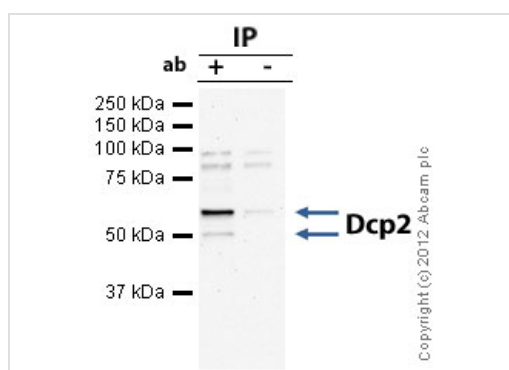
ICC/IF image of ab28658 stained human HeLa cells. The cells were PFA fixed (10 min), permeabilised in TBS-T (20 min) and incubated with the antibody (ab28658, 1µg/ml) for 1h at room temperature. 1%BSA / 10% normal goat serum / 0.3M glycine was used to quench autofluorescence and block non-specific protein-protein 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).



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  $\mu$ 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](http://www.proteinatlas.org)



Immunoprecipitation - Anti-Dcp2 antibody (ab28658)

Dcp2 was immunoprecipitated using 0.5mg Jurkat whole cell extract, 5 $\mu$ g of Rabbit polyclonal to Dcp2 and 50 $\mu$ l 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 40 $\mu$ l SDS loading buffer and incubated for 10min at 70 $^{\circ}$ C; 10 $\mu$ l 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](http://www.abcam.com)).

Band: 52,58kDa: Dcp2.

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