


## Product datasheet

### Anti-CDC42 antibody ab64533

KO VALIDATED

★★★★☆ 8 Abreviews 40 References 5 Images

#### Overview

Product name	Anti-CDC42 antibody
Description	Rabbit polyclonal to CDC42
Host species	Rabbit
Specificity	Replenishment batches of our polyclonal antibody, ab64533 are tested in WB. Previous batches were additionally validated in ICC/IF. This application is still expected to work and is covered by our Abpromise guarantee. You may also be interested in our alternative recombinant antibody, <a href="#">ab187643</a> .
Tested applications	<b>Suitable for:</b> ICC/IF, WB
Species reactivity	<b>Reacts with:</b> Mouse, Human <b>Predicted to work with:</b> Rat, Pig, Saccharomyces cerevisiae, Chimpanzee, Zebrafish 
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 100 to the C-terminus of Human CDC42. Read Abcam's proprietary immunogen policy (Peptide available as <a href="#">ab66571</a> .)
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

#### 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	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS

Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising

agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

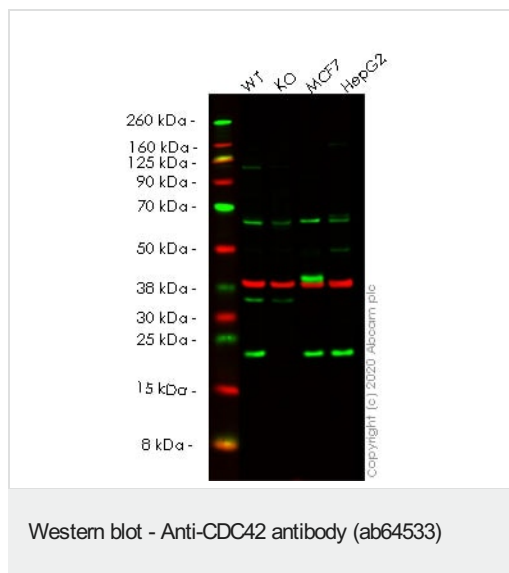
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab64533 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★★ (1)	Use a concentration of 5 µg/ml.
WB	★★★★★ (4)	Use a concentration of 1 µg/ml. Detects a band of approximately 21 kDa (predicted molecular weight: 21 kDa).

## Target

<b>Function</b>	Plasma membrane-associated small GTPase which cycles between an active GTP-bound and an inactive GDP-bound state. In active state binds to a variety of effector proteins to regulate cellular responses. Involved in epithelial cell polarization processes. Causes the formation of thin, actin-rich surface projections called filopodia.
<b>Sequence similarities</b>	Belongs to the small GTPase superfamily. Rho family. CDC42 subfamily.
<b>Post-translational modifications</b>	AMPylation at Tyr-32 and Thr-35 are mediated by bacterial enzymes in case of infection by <i>H.somnus</i> and <i>V.parahaemolyticus</i> , respectively. AMPylation occurs in the effector region and leads to inactivation of the GTPase activity by preventing the interaction with downstream effectors, thereby inhibiting actin assembly in infected cells. It is unclear whether some human enzyme mediates AMPylation; FICD has such ability in vitro but additional experiments remain to be done to confirm results in vivo.
<b>Cellular localization</b>	Cell membrane.
<b>Form</b>	There are 2 isoforms produced by alternative splicing. Isoform 1 also known as: Brain; Isoform 2 also known as: Placental.

## Images



**All lanes :** Anti-CDC42 antibody (ab64533) at 1 µg/ml

**Lane 1 :** Wild-type HEK-293T cell lysate

**Lane 2 :** CDC42 knockout HEK-293T cell lysate

**Lane 3 :** MCF7 cell lysate

**Lane 4 :** HepG2 cell lysate

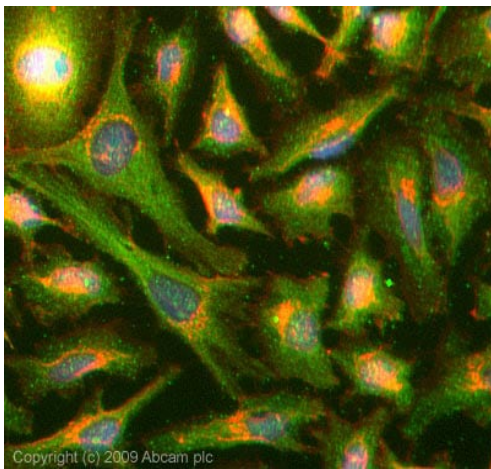
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Predicted band size:** 21 kDa

**Lanes 1-4:** Merged signal (red and green). Green - ab64533 observed at 20 kDa. Red - loading control **ab8245** observed at 37 kDa.

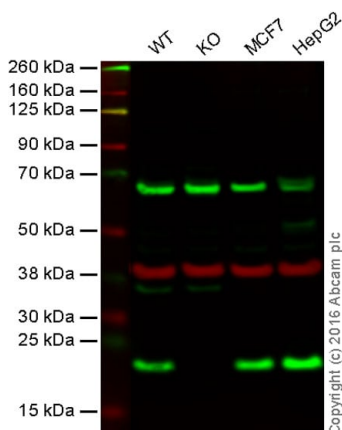
ab64533 Anti-CDC42 antibody was shown to specifically react with CDC42 in wild-type HEK-293T cells. Loss of signal was observed when knockout cell line **ab266522** (knockout cell lysate **ab256868**) was used. Wild-type and CDC42 knockout samples were subjected to SDS-PAGE. ab64533 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 µg/ml and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Copyright (c) 2009 Abcam plc

Immunocytochemistry/ Immunofluorescence - Anti-CDC42 antibody (ab64533)

ICC/IF image of ab64533 stained HeLa cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal Goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab64533, 5µg/ml) overnight at +4°C. 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) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue). This antibody also gave a positive result in 4% pfa fixed (10 min) HeLa cells at 5µg/ml.



Western blot - Anti-CDC42 antibody (ab64533)

**All lanes :** Anti-CDC42 antibody (ab64533) at 1 µg/ml

**Lane 1 :** Wild-type HAP1 cell lysate

**Lane 2 :** CDC42 knockout HAP1 cell lysate

**Lane 3 :** MCF7 cell lysate

**Lane 4 :** HepG2 cell lysate

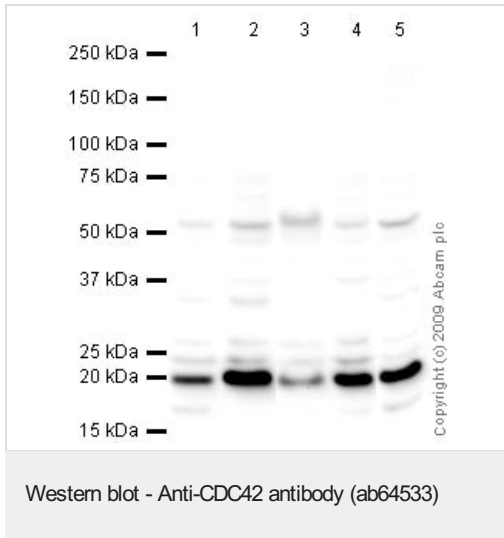
Lysates/proteins at 20 µg per lane.

**Predicted band size:** 21 kDa

**Lanes 1 -4:** Merged signal (red and green). Green – ab64533 observed at 20 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

Ab64533 was shown to recognize CDC42 in wild-type HAP1 cells along with additional cross-reactive bands. No band was observed when CDC42 knockout samples were examined. Wild-type and CDC42 knockout samples were subjected to SDS-PAGE. Ab64533 and **ab8245** (loading control to GAPDH) were diluted at 1µg/ml and 1/10,000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at

1/10,000 dilution for 1 hour at room temperature before imaging.



**All lanes :** Anti-CDC42 antibody (ab64533) 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 :** HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate

**Lane 4 :** MCF7 (Human breast adenocarcinoma cell line) Whole Cell Lysate

**Lane 5 :** U2OS (Human osteosarcoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

### Secondary

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

Developed using the ECL technique.

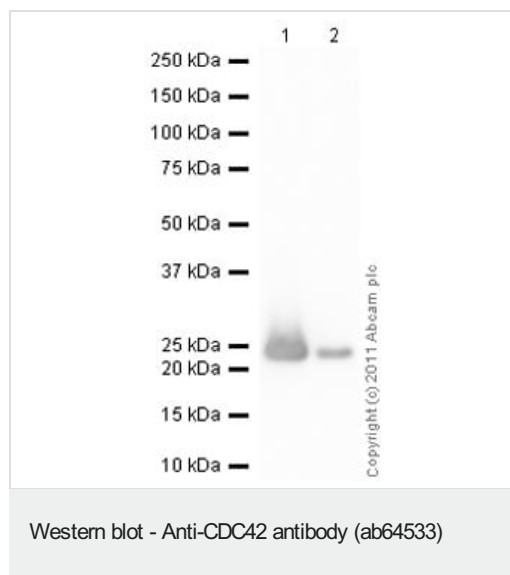
Performed under reducing conditions.

**Predicted band size:** 21 kDa

**Observed band size:** 21 kDa

**Additional bands at:** 52 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 3 minutes



**All lanes :** Anti-CDC42 antibody (ab64533) at 1 µg/ml

**Lane 1 :** Recombinant Human CDC42 protein (**ab87713**) at 0.1 µg

**Lane 2 :** Recombinant Human CDC42 protein (**ab87713**) at 0.01 µg

### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (**ab97080**) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 21 kDa

**Exposure time:** 1 minute

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

### Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

### Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors