

## Product datasheet

# Anti-PAR-3/PARD3 antibody ab64646

★★★★★ 3 Abreviews 7 References 3 Images

### Overview

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<b>Product name</b>	Anti-PAR-3/PARD3 antibody
<b>Description</b>	Rabbit polyclonal to PAR-3/PARD3
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-FrFI, ICC/IF, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Rat, Human <b>Predicted to work with:</b> Mouse, Sheep, Chimpanzee 
<b>Immunogen</b>	Synthetic peptide corresponding to Human PAR-3/PARD3 aa 1300 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. (Peptide available as <a href="#">ab73313</a> , <a href="#">ab73314</a> )
<b>Positive control</b>	This antibody gave a positive signal in the following Lysates: HeLa Whole Cell, Rat Thymus Tissue, Rat Brain Tissue, and SW480 Whole Cell This antibody gave a positive result in IHC in the following FFPE tissue: Human lung adenocarcinoma.
<b>General notes</b>	Previously labelled as PARD3

### Properties

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<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

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Our [Abpromise guarantee](#) covers the use of **ab64646** in the following tested applications.

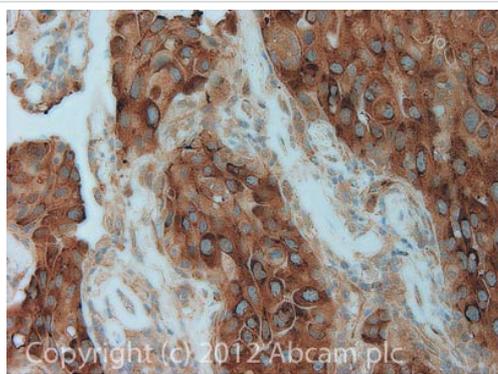
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 150 kDa (predicted molecular weight: 150 kDa).
IHC-FrFI	★★★★☆	Use at an assay dependent concentration.
ICC/IF	★★★★☆	Use a concentration of 1 - 5 µg/ml.
IHC-P	★★★★☆	Use a concentration of 0.5 µg/ml.

## Target

<b>Function</b>	Adapter protein involved in asymmetrical cell division and cell polarization processes. Seems to play a central role in the formation of epithelial tight junctions. Targets the phosphatase PTEN to cell junctions (By similarity). Association with PARD6B may prevent the interaction of PARD3 with F11R/JAM1, thereby preventing tight junction assembly. The PARD6-PARD3 complex links GTP-bound Rho small GTPases to atypical protein kinase C proteins. Required for establishment of neuronal polarity and normal axon formation in cultured hippocampal neurons.
<b>Tissue specificity</b>	Widely expressed.
<b>Sequence similarities</b>	Belongs to the PAR3 family. Contains 3 PDZ (DHR) domains.
<b>Domain</b>	Contains a conserved N-terminal oligomerization domain (NTD) that is involved in oligomerization and is essential for proper subapical membrane localization. The second PDZ domain mediates interaction with membranes containing phosphoinositol lipids.
<b>Post-translational modifications</b>	Phosphorylated by PRKCZ. EGF-induced Tyr-1127 phosphorylation mediates dissociation from LIMK2. Phosphorylation by STK6/AURKA at Ser-962 is required for the normal establishment of neuronal polarity.
<b>Cellular localization</b>	Endomembrane system. Cell junction. Cell junction > tight junction. Cell membrane. Cytoplasm > cell cortex. Cytoplasm > cytoskeleton. Localized along the cell-cell contact region. Colocalizes with PARD6A and PRKCI at epithelial tight junctions. Colocalizes with the cortical actin that overlays the meiotic spindle during metaphase I and metaphase II (By similarity). Presence of KRIT1, CDH5 and RAP1B is required for its localization to the cell junction.

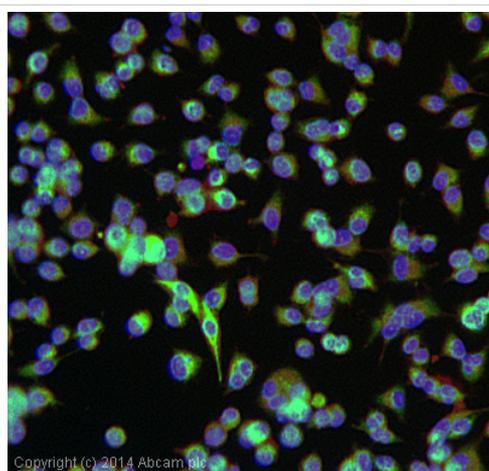
## Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PAR-3/PARD3 antibody (ab64646)

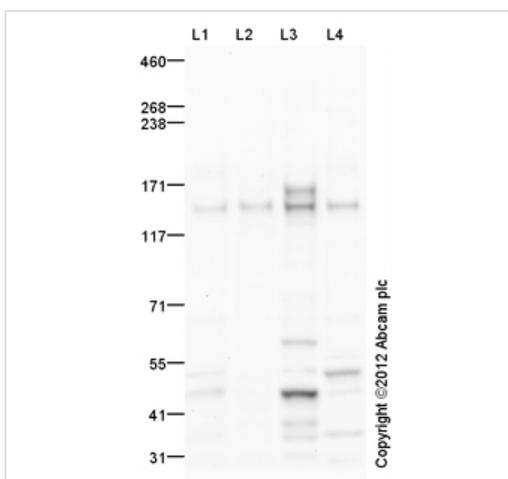
IHC image of PAR-3/PARD3 staining in Human lung adenocarcinoma formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab64646, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Immunocytochemistry/ Immunofluorescence - Anti-PAR-3/PARD3 antibody (ab64646)

ab64646 stained A549 cells. The cells were 100% methanol fixed for 5 minutes at -20°C\* and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1hour at room temperature to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab64646 at 5µg/ml) overnight at +4°C. The secondary antibody (pseudo-colored green) was Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed (ab150081) used at a 1/1000 dilution for 1hour at room temperature. Alexa Fluor® 594 WGA was used to label plasma membranes (pseudo-colored red) at a 1/200 dilution for 1hour at room temperature. DAPI was used to stain the cell nuclei (pseudo-colored blue) at a concentration of 1.43µM for 1hour at room temperature.



Western blot - Anti-PAR-3/PARD3 antibody (ab64646)

**All lanes** : Anti-PAR-3/PARD3 antibody (ab64646) at 1 µg/ml

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

**Lane 2** : Thymus (Rat) Tissue Lysate

**Lane 3** : Brain (Rat) Tissue Lysate

**Lane 4** : SW480 (Human colon adenocarcinoma 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:** 150 kDa

**Observed band size:** 150 kDa

**Additional bands at:** 170 kDa, 45 kDa, 53 kDa, 60 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 1 minute

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

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