


## Product datasheet

### Anti-DIAPH1 antibody ab96784

★★★★★ [1 Abreviews](#) [4 References](#) [2 Images](#)

#### Overview

<b>Product name</b>	Anti-DIAPH1 antibody
<b>Description</b>	Rabbit polyclonal to DIAPH1
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse 
<b>Immunogen</b>	Recombinant fragment, corresponding to a sequence within amino acids 1-207 of Human DIAPH1
<b>Positive control</b>	H1299 and Raji whole cell lysates. HeLa cells
<b>General notes</b>	<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

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
<b>Storage buffer</b>	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 1.21% Tris, 0.75% Glycine, 10% Glycerol (glycerin, glycerine)
<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 ab96784 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	★★★★★ (1)	1/500 - 1/3000. Predicted molecular weight: 141 kDa.
ICC/IF		1/100 - 1/200.

## Target

### Function

Acts in a Rho-dependent manner to recruit PFY1 to the membrane. Required for the assembly of F-actin structures, such as actin cables and stress fibers. Nucleates actin filaments. Binds to the barbed end of the actin filament and slows down actin polymerization and depolymerization. Required for cytokinesis, and transcriptional activation of the serum response factor. DFR proteins couple Rho and Src tyrosine kinase during signaling and the regulation of actin dynamics. Functions as a scaffold protein for MAPRE1 and APC to stabilize microtubules and promote cell migration (By similarity). Has neurite outgrowth promoting activity (By similarity). In hair cells, it may play a role in the regulation of actin polymerization in hair cells. The MEMO1-RHOA-DIAPH1 signaling pathway plays an important role in ERBB2-dependent stabilization of microtubules at the cell cortex. It controls the localization of APC and CLASP2 to the cell membrane, via the regulation of GSK3B activity. In turn, membrane-bound APC allows the localization of the MACF1 to the cell membrane, which is required for microtubule capture and stabilization.

### Tissue specificity

Expressed in brain, heart, placenta, lung, kidney, pancreas, liver, skeletal muscle and cochlea.

### Involvement in disease

Defects in DIAPH1 are the cause of deafness autosomal dominant type 1 (DFNA1) [MIM:124900]. DFNA1 is a form of sensorineural hearing loss. Sensorineural deafness results from damage to the neural receptors of the inner ear, the nerve pathways to the brain, or the area of the brain that receives sound information.

### Sequence similarities

Belongs to the formin homology family. Diaphanous subfamily.  
Contains 1 DAD (diaphanous autoregulatory) domain.  
Contains 1 FH1 (formin homology 1) domain.  
Contains 1 FH2 (formin homology 2) domain.  
Contains 1 GBD/FH3 (Rho GTPase-binding/formin homology 3) domain.

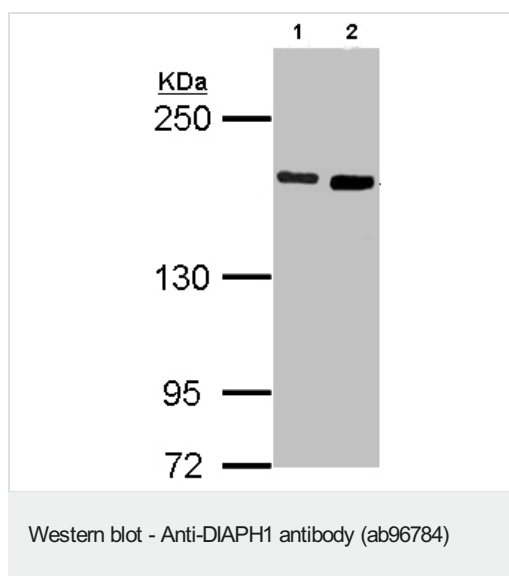
### Domain

DRFs are regulated by intramolecular GBD-DAD binding where Rho-GTP activates the DRFs by disrupting the GBD-DAD interaction (By similarity). DCAF7 binds to the FH2 (formin homology 2) domain.

### Cellular localization

Cell membrane. Cell projection > ruffle membrane. Cytoplasm > cytoskeleton. Membrane ruffles, especially at the tip of ruffles, of motile cells.

## Images



**All lanes :** Anti-DIAPH1 antibody (ab96784) at 1/1000 dilution

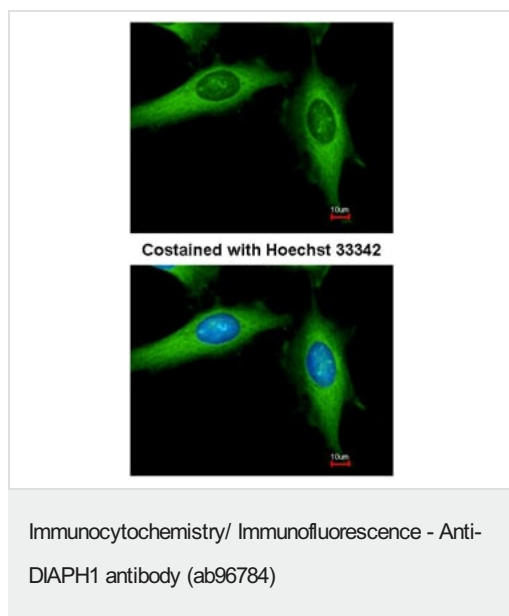
**Lane 1 :** H1299 whole cell lysate

**Lane 2 :** Raji whole cell lysate

Lysates/proteins at 30 µg per lane.

**Predicted band size:** 141 kDa

7.5% SDS-PAGE.



ab96784 at 1/200 dilution staining DIAPH1 in HeLa cells by Immunofluorescence, Paraformaldehyde fixed. Lower image is co-stained with Hoechst 33342.

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

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