

DIAPH1 Antibody
Rabbit mAb
Catalog # AP91996

Specification

DIAPH1 Antibody - Product Information

Application	WB, IHC, ICC
Primary Accession	O60610
Reactivity	Rat
Clonality	Monoclonal
Other Names	
DIAPH1; DFNA1; DIA1; DIAP1; DIAPH1; DRF1; hDIA1; LFHL1;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	141347 Da

DIAPH1 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human DIAPH1
Description	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.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

DIAPH1 Antibody - Protein Information

Name DIAPH1

Synonyms DIAP1

Function

Actin nucleation and elongation factor required for the assembly of F-actin structures, such as actin cables and stress fibers (By similarity). Binds to the barbed end of the actin filament and slows down actin polymerization and depolymerization (By similarity). Required for cytokinesis, and transcriptional activation of the serum response factor (By similarity). DFR proteins couple Rho

and Src tyrosine kinase during signaling and the regulation of actin dynamics (By similarity). Functions as a scaffold protein for MAPRE1 and APC to stabilize microtubules and promote cell migration (By similarity). Has neurite outgrowth promoting activity. Acts in a Rho-dependent manner to recruit PFY1 to the membrane (By similarity). In hair cells, it may play a role in the regulation of actin polymerization in hair cells (PubMed:[20937854](http://www.uniprot.org/citations/20937854)), PubMed:[21834987](http://www.uniprot.org/citations/21834987)), PubMed:[26912466](http://www.uniprot.org/citations/26912466)). The MEMO1-RHOA- DIAPH1 signaling pathway plays an important role in ERBB2-dependent stabilization of microtubules at the cell cortex (PubMed:[20937854](http://www.uniprot.org/citations/20937854)), PubMed:[21834987](http://www.uniprot.org/citations/21834987)). It controls the localization of APC and CLASP2 to the cell membrane, via the regulation of GSK3B activity (PubMed:[20937854](http://www.uniprot.org/citations/20937854)), PubMed:[21834987](http://www.uniprot.org/citations/21834987)). In turn, membrane-bound APC allows the localization of the MACF1 to the cell membrane, which is required for microtubule capture and stabilization (PubMed:[20937854](http://www.uniprot.org/citations/20937854)), PubMed:[21834987](http://www.uniprot.org/citations/21834987)). Plays a role in the regulation of cell morphology and cytoskeletal organization. Required in the control of cell shape (PubMed:[20937854](http://www.uniprot.org/citations/20937854)), PubMed:[21834987](http://www.uniprot.org/citations/21834987)). Plays a role in brain development (PubMed:[24781755](http://www.uniprot.org/citations/24781755)). Also acts as an actin nucleation and elongation factor in the nucleus by promoting nuclear actin polymerization inside the nucleus to drive serum-dependent SRF-MRTFA activity (By similarity).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:O08808}. Cell projection, ruffle membrane {ECO:0000250|UniProtKB:O08808} Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle. Cytoplasm {ECO:0000250|UniProtKB:O08808}. Nucleus {ECO:0000250|UniProtKB:O08808} Note=Membrane ruffles, especially at the tip of ruffles, of motile cells. {ECO:0000250|UniProtKB:O08808}

Tissue Location

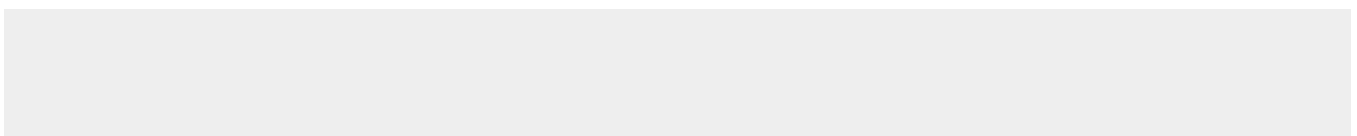
Expressed in brain, heart, placenta, lung, kidney, pancreas, liver, skeletal muscle and cochlea. Expressed in platelets (PubMed:26912466).

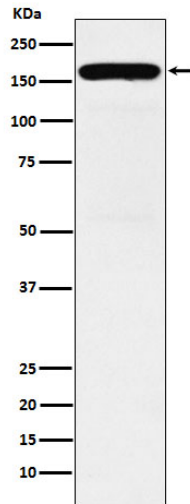
DIAPH1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

DIAPH1 Antibody - Images





Western blot analysis of DIAPH1 expression in K562 cell lysate.