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DIAPH1 antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI15035

Product Information

Application	WB
Primary Accession	O60610
Other Accession	NM_005219, NP_005210
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Dog, Bovine
Predicted	Human, Rat, Rabbit, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	141347

Additional Information

Gene ID	1729
Alias Symbol	DFNA1, DIA1, DRF1, FLJ25265, LFHL1, hDIA1
Other Names	Protein diaphanous homolog 1, Diaphanous-related formin-1, DRF1, DIAPH1, DIAP1
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-DIAPH1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	DIAPH1 antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

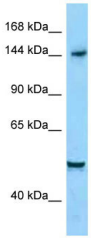
Name	DIAPH1
Synonyms	DIAP1
Function	Actin nucleation and elongation factor required for the assembly of F-actin structures, such as actin cables and stress fibers (By similarity). Binds to the barbed end of the actin filament and slows down actin polymerization and depolymerization (By similarity). Required 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 hear cells, it may play a role in the regulation of actin polymerization in hair cells (PubMed:20937854, PubMed:21834987, PubMed:26912466). The MEMO1-RHOA- DIAPH1 signaling pathway plays an important role in ERBB2-dependent stabilization of microtubules at the cell cortex (PubMed:20937854, PubMed:21834987). It controls the localization of APC and CLASP2 to the cell membrane, via the regulation of GSK3B activity (PubMed:20937854, PubMed: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, PubMed:21834987). Plays a role in the regulation of cell morphology and cytoskeletal organization. Required in the control of cell shape (PubMed:20937854, PubMed:21834987). Plays a role in brain development (PubMed: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).

References

Lynch E.D.,et al.Science 278:1315-1318(1997).
Totoki Y.,et al.Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.
Schmutz J.,et al.Nature 431:268-274(2004).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Morita K.,et al.J. Dermatol. Sci. 44:11-20(2006).

Images



WB Suggested Anti-DIAPH1 Antibody Titration: 1.0 µg/ml
Positive Control: HepG2 Whole CellThere is BioGPS gene expression data showing that DIAPH1 is expressed in HepG2