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KD-Validated Anti-Diaphanous related formin 1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1017

Product Information

Application	WB, FC, ICC
Primary Accession	O60610
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB 1990
Calculated MW	141347
Gene Name	DIAPH1
Aliases	DIAPH1; Diaphanous Related Formin 1; HDIA1; LFHL1; Mammalian Diaphanous Related Formin 1; Protein Diaphanous Homolog 1; MDia1; DFNA1; DRF1; Diaphanous (Drosophila, Homolog) 1; Diaphanous Homolog 1 (Drosophila); Diaphanous-Related Formin-1; SCBMS; MDIA1; DIAP1; DIA1
Immunogen	A synthesized peptide derived from human DIAPH1

Additional Information

Gene ID	1729
Other Names	Protein diaphanous homolog 1, Diaphanous-related formin-1, DRF1, DIAPH1, DIAP1

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).

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