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

Rabbit monoclonal antibody
Catalog # AGI1017

Specification

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

Application	**WB, FC, ICC**
Primary Accession	O60610
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 141 kDa , observed, 155 kDa KDa**
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**

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

Gene ID	**1729**

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

KD-Validated Anti-Diaphanous related formin 1 Rabbit Monoclonal 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 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).

KD-Validated Anti-Diaphanous related formin 1 Rabbit Monoclonal 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 Cytomety
- Cell Culture

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

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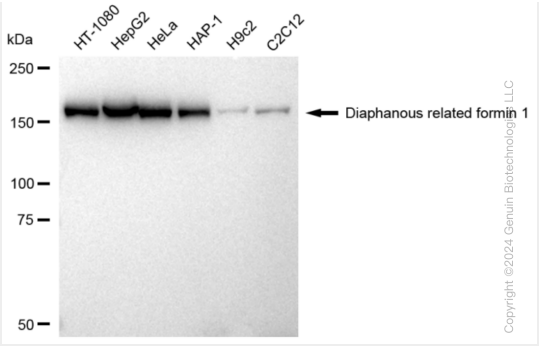
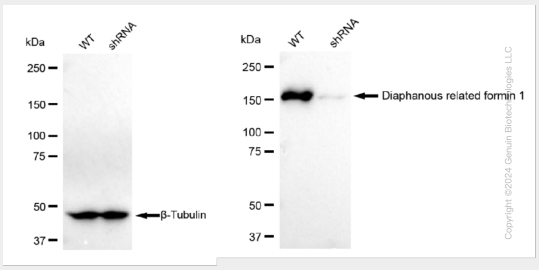
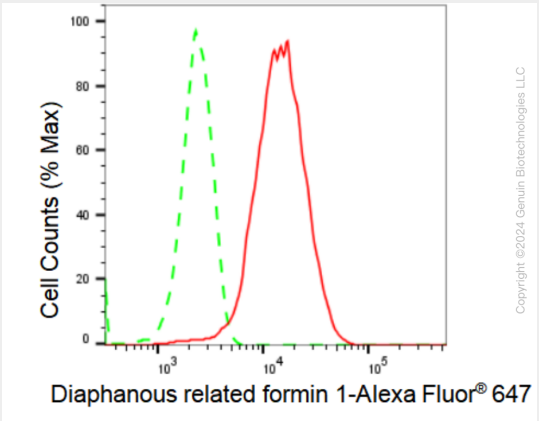


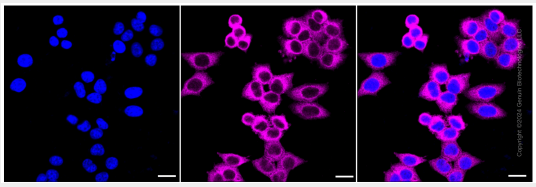
Western blotting analysis using anti-Diaphanous related formin 1 antibody (Cat#AGI1017). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Diaphanous related formin 1 antibody (Cat#AGI1017, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-Diaphanous related formin 1 antibody (Cat#AGI1017). Diaphanous related formin 1 expression in wild type (WT) and diaphanous related formin 1 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-Diaphanous related formin 1 antibody (Cat#AGI1017, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Diaphanous related formin 1 expression in HepG2 cells using Diaphanous related formin 1 antibody (Cat#AGI1017, 1:2,000). Green, isotype control; red, Diaphanous related formin 1.



Immunocytochemical staining of HepG2 cells with Diaphanous related formin 1 antibody (Cat#AGI1017, 1:1,000). Nuclei were stained blue with DAPI; Diaphanous related formin 1 was

stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.