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# DIAPH3 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16587b

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | Q9NSV4 |
| **Other Accession** | NP_001035982.1, NP_112194.2 |
| **Reactivity** | Human |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB35590 |
| **Calculated MW** | 136926 |
| **Antigen Region** | 1061-1090 |

## Additional Information

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| **Gene ID** | 81624 |
| **Other Names** | Protein diaphanous homolog 3, Diaphanous-related formin-3, DRF3, MDia2, DIAPH3, DIAP3 |
| **Target/Specificity** | This DIAPH3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1061-1090 amino acids from the C-terminal region of human DIAPH3. |
| **Dilution** | WB~~1:1000 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | DIAPH3 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | DIAPH3 |
| **Synonyms** | DIAP3 |
| **Function** | Actin nucleation and elongation factor required for the assembly of F-actin |

structures, such as actin cables and stress fibers. Required for cytokinesis, stress fiber formation and transcriptional activation of the serum response factor. Binds to GTP-bound form of Rho and to profilin: acts in a Rho-dependent manner to recruit profilin to the membrane, where it promotes actin polymerization. DFR proteins couple Rho and Src tyrosine kinase during signaling and the regulation of actin dynamics. 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.

**Cellular Location**

Cytoplasm. Nucleus {ECO:0000250|UniProtKB:Q9Z207} Note=During mitosis, co-localizes with the actin-rich cleavage furrow and with the microtubule-rich central spindle during cytokinesis (PubMed:18755006, PubMed:19457867). Shuttles between the cytoplasm and the nucleus (By similarity). {ECO:0000250|UniProtKB:Q9Z207, ECO:0000269|PubMed:18755006, ECO:0000269|PubMed:19457867}

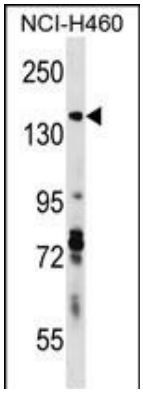
## Background

DIAPH3 binds to GTP-bound form of Rho and to profilin. Acts in a Rho-dependent manner to recruit profilin to the membrane, where it promotes actin polymerization. It is required for cytokinesis, stress fiber formation, and transcriptional activation of the serum response factor. DFR proteins couple Rho and Src tyrosine kinase during signaling and the regulation of actin dynamics (By similarity).

## References

DeWard, A.D., et al. J. Biol. Chem. 284(30):20061-20069(2009)
Block, J., et al. J Microsc 231(3):506-517(2008)
Beli, P., et al. Nat. Cell Biol. 10(7):849-857(2008)
Yang, C., et al. PLoS Biol. 5 (11), E317 (2007) :
Gupton, S.L., et al. J. Cell. Sci. 120 (PT 19), 3475-3487 (2007) :

## Images




DIAPH3 Antibody (C-term) (Cat. #AP16587b) western blot analysis in NCI-H460 cell line lysates (35ug/lane).This demonstrates the DIAPH3 antibody detected the DIAPH3 protein (arrow).