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#14634

Diap1 (E1E4K) Rabbit mAb

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New 09/14

Entrez-Gene ID #1729
UniProt ID #O60610

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Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H	150 kDa	Rabbit IgG**

Background: Formins are a family of large multidomain actin nucleation/polymerization proteins characterized by their catalytic FH2 domains. The mammalian diaphanous-related formin (mDia/diap) subfamily, including mDia1/diap1, mDia2/diap3 and mDia3/diap2, are effectors of Rho family small GTPases. In response to Rho, mDia/diap proteins are involved in the regulation of multiple cell functions including cytoskeletal dynamics, migration, adhesion, polarity and cell shape (reviewed in 1,2).

mDia1/diap1 is activated by GTP-bound Rho, leading to Rho-associated kinase (ROCK)-dependent stress fiber formation (3,4). Rho activation of mDia1 has also been shown to regulate serum response factor (SRF)-dependent transcription (5), and has been implicated in human cancer phenotypes such as ras-mediated transformation, metastasis, and invasion (reviewed in 6).

mDia3/diap2, activated by the Rho family small GTPase cdc42, regulates the attachment of microtubules to the kinetochore during mitosis in mammalian cells (7).

Rho-dependent activation of mDia2/diap3 is important in assembly of the contractile ring during cytokinesis (8,9).

Specificity/Sensitivity: Diap1 (E1E4K) Rabbit mAb recognizes endogenous levels of total Diap1 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg15 of human Diap1 protein.

Background References:

(1) Schönichen, A. and Geyer, M. (2010) *Biochim Biophys Acta* 1803, 152-63.

(2) Chesarone, M.A. et al. (2010) *Nat Rev Mol Cell Biol* 11, 62-74.

(3) Watanabe, N. et al. (1999) *Nat Cell Biol* 1, 136-43.

(4) Ishizaki, T. et al. (2001) *Nat Cell Biol* 3, 8-14.

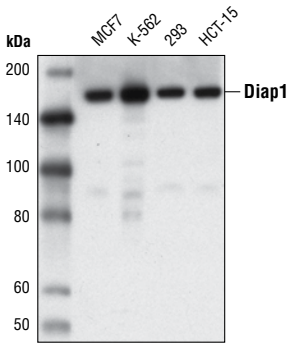
(5) Copeland, J.W. and Treisman, R. (2002) *Mol Biol Cell* 13, 4088-99.

(6) Narumiya, S. et al. (2009) *Cancer Metastasis Rev* 28, 65-76.

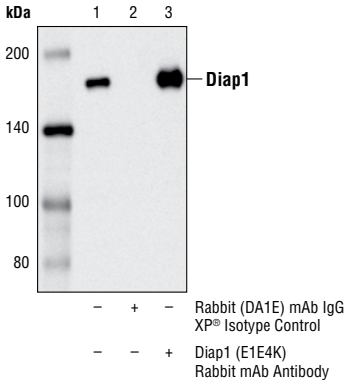
(7) Yasuda, S. et al. (2004) *Nature* 428, 767-71.

(8) Watanabe, S. et al. (2010) *Mol Biol Cell* 21, 3193-204.

(9) Watanabe, S. et al. (2008) *Mol Biol Cell* 19, 2328-38.



Western blot analysis of extracts from various cell lines using Diap1 (E1E4K) Rabbit mAb.



Immunoprecipitation of Diap1 from MCF7 cell extracts using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or Diap1 (E1E4K) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot was performed using Diap1 (E1E4K) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.