

POLDIP3 (G-2): sc-398931

BACKGROUND

POLDIP3 (polymerase δ -interacting protein 3), also known as SKAR or PDIP46, is a 421 amino acid nuclear protein. POLDIP3 interacts with DNA pol δ 2, a protein essential to DNA replication, recombination and repair. POLDIP3 is a substrate for the signaling intermediate Rsk-1 and is thought to regulate cell growth. POLDIP3 contains one RRM (RNA recognition motif) domain and is phosphorylated upon DNA damage. POLDIP3 is ubiquitously expressed with highest levels found in heart, kidney, skeletal muscle and brain. Due to alternative splicing, POLDIP3 is expressed as two isoforms.

REFERENCES

1. Hirosawa, M., et al. 2001. Identification of novel transcribed sequences on human chromosome 22 by expressed sequence tag mapping. *DNA Res.* 8: 1-9.
2. Liu, L., et al. 2003. Identification of a novel protein, PDIP38, that interacts with the p50 subunit of DNA polymerase δ and proliferating cell nuclear antigen. *J. Biol. Chem.* 278: 10041-10047.
3. Richardson, C.J., et al. 2004. SKAR is a specific target of S6 kinase 1 in cell growth control. *Curr. Biol.* 14: 1540-1549.
4. Andersen, J.S., et al. 2005. Nucleolar proteome dynamics. *Nature* 433: 77-83.
5. Smyk, A., et al. 2006. Human enhancer of rudimentary is a molecular partner of PDIP46/SKAR, a protein interacting with DNA polymerase δ and S6K1 and regulating cell growth. *FEBS J.* 273: 4728-4741.
6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611520. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: POLDIP3 (human) mapping to 22q13.2; Poldip3 (mouse) mapping to 15 E1.

SOURCE

POLDIP3 (G-2) is a mouse monoclonal antibody raised against amino acids 46-186 mapping within an internal region of POLDIP3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-398931 X, 200 μ g/0.1 ml.

POLDIP3 (G-2) is available conjugated to agarose (sc-398931 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398931 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398931 PE), fluorescein (sc-398931 FITC), Alexa Fluor® 488 (sc-398931 AF488), Alexa Fluor® 546 (sc-398931 AF546), Alexa Fluor® 594 (sc-398931 AF594) or Alexa Fluor® 647 (sc-398931 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398931 AF680) or Alexa Fluor® 790 (sc-398931 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

POLDIP3 (G-2) is recommended for detection of POLDIP3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for POLDIP3 siRNA (h): sc-76192, POLDIP3 siRNA (m): sc-76193, POLDIP3 shRNA Plasmid (h): sc-76192-SH, POLDIP3 shRNA Plasmid (m): sc-76193-SH, POLDIP3 shRNA (h) Lentiviral Particles: sc-76192-V and POLDIP3 shRNA (m) Lentiviral Particles: sc-76193-V.

POLDIP3 (G-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

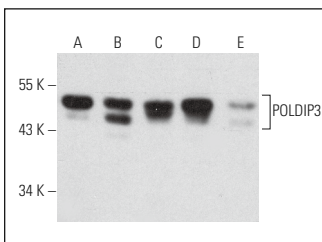
Molecular Weight of POLDIP3 isoforms: 46/43 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, CCRF-CEM cell lysate: sc-2225 or RAW 264.7 whole cell lysate: sc-2211.

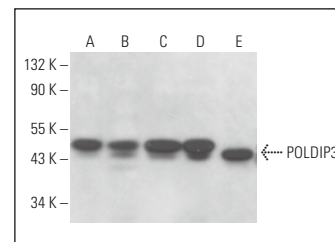
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



POLDIP3 (G-2): sc-398931. Western blot analysis of POLDIP3 expression in Hep G2 (A), CCRF-CEM (B), RAW 264.7 (C), NIH/3T3 (D) and NRK (E) whole cell lysates.



POLDIP3 (G-2): sc-398931. Western blot analysis of POLDIP3 expression in SJRH30 (A), HL-60 (B), c4 (C) and F9 (D) whole cell lysates and NIH/3T3 nuclear extract (E).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.