SANTA CRUZ BIOTECHNOLOGY, INC.

POLDIP3 (H-141): sc-292118

BACKGROUND

POLDIP3 (polymerase delta-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 delta 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 delta 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/
7. Ma, X.M., et al. 2008. SKAR links pre-mRNA splicing to mTOR/S6K1-mediated enhanced translation efficiency of spliced mRNAs. Cell 133: 303-313.

CHROMOSOMAL LOCATION

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

SOURCE

POLDIP3 (H-141) is a rabbit polyclonal antibody raised against amino acids 46-186 mapping within an internal region of POLDIP3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-292118 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

POLDIP3 (H-141) is recommended for detection of POLDIP3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

POLDIP3 (H-141) is also recommended for detection of POLDIP3 in additional species, including equine, canine and porcine.

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 (H-141) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of POLDIP3 isoforms: 46/43 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.