

# palladin (G-2): sc-166563

## BACKGROUND

Palladin, also known as PALLD, PNCA1 or SIH002, is a 1,383 amino acid protein that localizes to both the cytoplasm and the cytoskeleton and contains five immunoglobulin (Ig)-like domains. Expressed as several alternatively spliced isoforms that are found in kidney, prostate, ovary and colon, palladin functions as a cytoskeletal protein that is required both for the organization of the actin cytoskeleton, as well as for the establishment of proper cell motility, cell adhesion and cell-matrix interactions. Palladin interacts with Eps8, LASP-1 and VASP and may also play a role in cytoskeletal scaffolding and Actin remodeling. In response to DNA damage, palladin is subject to phosphorylation on select serine residues. Defects in the gene encoding palladin may increase genetic susceptibility to pancreatic cancer, strongly suggesting a role for palladin in tumorigenesis.

## REFERENCES

1. Parast, M.M. and Otey, C.A. 2000. Characterization of palladin, a novel protein localized to stress fibers and cell adhesions. *J. Cell Biol.* 150: 643-656.
2. Mykkanen, O.M., et al. 2001. Characterization of human palladin, a microfilament-associated protein. *Mol. Biol. Cell* 12: 3060-3073.
3. Eberle, M.A., et al. 2002. A new susceptibility locus for autosomal dominant pancreatic cancer maps to chromosome 4q32-34. *Am. J. Hum. Genet.* 70: 1044-1048.
4. Moriyama, K. and Bonifacino, J.S. 2002. Palladin is a component of a multi-protein complex involved in the biogenesis of lysosome-related organelles. *Traffic* 3: 666-677.

## CHROMOSOMAL LOCATION

Genetic locus: PALLD (human) mapping to 4q32.3; Palld (mouse) mapping to 8 B3.1.

## SOURCE

palladin (G-2) is a mouse monoclonal antibody raised against amino acids 361-460 mapping within an internal region of palladin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

palladin (G-2) is available conjugated to agarose (sc-166563 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166563 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166563 PE), fluorescein (sc-166563 FITC), Alexa Fluor<sup>®</sup> 488 (sc-166563 AF488), Alexa Fluor<sup>®</sup> 546 (sc-166563 AF546), Alexa Fluor<sup>®</sup> 594 (sc-166563 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-166563 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-166563 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-166563 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## STORAGE

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

## APPLICATIONS

palladin (G-2) is recommended for detection of palladin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for palladin siRNA (h): sc-88986, palladin siRNA (m): sc-151999, palladin shRNA Plasmid (h): sc-88986-SH, palladin shRNA Plasmid (m): sc-151999-SH, palladin shRNA (h) Lentiviral Particles: sc-88986-V and palladin shRNA (m) Lentiviral Particles: sc-151999-V.

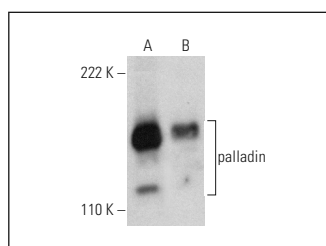
Molecular Weight of palladin: 140 kDa.

Positive Controls: palladin (m): 293 Lysate: sc-179285, HeLa whole cell lysate: sc-2200 or PC-3 cell lysate: sc-2220.

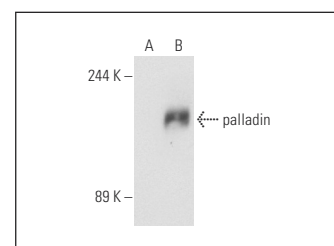
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



palladin (G-2): sc-166563. Western blot analysis of palladin expression in HeLa (A) and PC-3 (B) whole cell lysates.



palladin (G-2): sc-166563. Western blot analysis of palladin expression in non-transfected: sc-110760 (A) and mouse palladin transfected: sc-179285 (B) 293 whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Zhang, T., et al. 2022. Different extracellular β-Amyloid (1-42) aggregates differentially impair neural cell adhesion and neurite outgrowth through differential induction of scaffold palladin. *Biomolecules* 12: 1808.

## RESEARCH USE

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

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