

PARP-4 (B-11): sc-515898

BACKGROUND

PARP-1 is a nuclear protein that is specifically cleaved by caspase-3 and caspase-6, but not by caspase-1, into a signature apoptotic fragment. PARP-2 and PARP-3 interact with PARP-1. PARP-4, also designated vault poly(ADP-ribose) polymerase (VAPAR) and ADP-ribotransferase-like 1 (ADPRTL1), associates with the major vault protein (MVP) and telomerase-associated protein 1 (TEP1) to form vaults, barrel-shaped cytoplasmic ribonucleoprotein particles. PARP-4 localizes mainly to the cytoplasm but is also found in the nucleus. The PARP-4 protein is expressed widely, with highest levels observed in the kidney, and is also detected in skeletal muscle, heart, leukocytes, placenta, lung, liver, spleen, and pancreas. PARP-4 contains a PARP (ADPRT)-like catalytic domain, a C-terminal MVP-interacting domain, a domain with two sequences similar to inter-alpha-trypsin inhibitor, and an N-terminal BRCA1 C-terminus (BRCT) domain, which may be involved in protein-protein interactions.

REFERENCES

- Kickhoefer, V.A., et al. 1999. The 193-kD vault protein, VAPAR, is a novel poly(ADP-ribose) polymerase. *J. Cell Biol.* 146: 917-928.
- Still, I.H., et al. 2000. Identification of a novel gene (ADPRTL1) encoding a potential poly(ADP-ribosyl)transferase protein. *Genomics* 62: 533-536.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607519. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Raval-Fernandes, S., et al. 2005. Increased susceptibility of vault poly(ADP-ribose) polymerase-deficient mice to carcinogen-induced tumorigenesis. *Cancer Res.* 65: 8846-8852.
- Stewart, P.L., et al. 2005. Sea urchin vault structure, composition, and differential localization during development. *BMC Dev. Biol.* 5: 3.

CHROMOSOMAL LOCATION

Genetic locus: PARP4 (human) mapping to 13q12.12; Parp4 (mouse) mapping to 14 C3.

SOURCE

PARP-4 (B-11) is a mouse monoclonal antibody raised against amino acids 653-885 mapping within an internal region of PARP-4 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PARP-4 (B-11) is available conjugated to agarose (sc-515898 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515898 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515898 PE), fluorescein (sc-515898 FITC), Alexa Fluor[®] 488 (sc-515898 AF488), Alexa Fluor[®] 546 (sc-515898 AF546), Alexa Fluor[®] 594 (sc-515898 AF594) or Alexa Fluor[®] 647 (sc-515898 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515898 AF680) or Alexa Fluor[®] 790 (sc-515898 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PARP-4 (B-11) is recommended for detection of PARP-4 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 PARP-4 siRNA (h): sc-61299, PARP-4 siRNA (m): sc-61300, PARP-4 shRNA Plasmid (h): sc-61299-SH, PARP-4 shRNA Plasmid (m): sc-61300-SH, PARP-4 shRNA (h) Lentiviral Particles: sc-61299-V and PARP-4 shRNA (m) Lentiviral Particles: sc-61300-V.

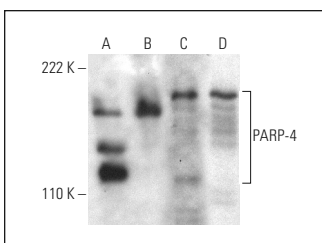
Molecular Weight of PARP-4: 193 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, WI-38 whole cell lysate: sc-364260 or human kidney extract: sc-363764.

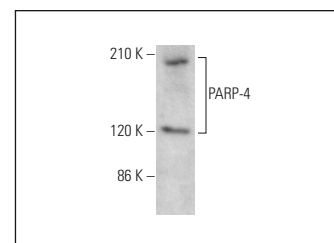
RECOMMENDED SUPPORT REAGENTS

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[™] 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



PARP-4 (B-11): sc-515898. Western blot analysis of PARP-4 expression in HT-29 (A), WI-38 (B) and Hep G2 (C) whole cell lysates and human kidney tissue extract (D).



PARP-4 (B-11): sc-515898. Western blot analysis of PARP-4 expression in Hep G2 (A) and F9 (B) whole cell lysates.

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.

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