SANTA CRUZ BIOTECHNOLOGY, INC.

PARP-3 (N-13): sc-30625

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Poly(ADP-ribose) polymerase-3 (PARP-3) is part of the base excision repair (BER) pathway, catalyzing the poly(ADP-ribosyl)ation of nuclear proteins. Poly (ADP-ribosyl)ation, a post-translational modification following DNA damage, appears as an obligatory step in a detection/signaling pathway leading to the reparation of DNA strand breaks. PARP-3 is a nuclear, DNA-binding protein, which interacts with PARP-1. PARP-3 is present in actively dividing tissues with highest levels in the kidney, skeletal muscle, liver, heart and spleen. Human PARP-3 maps to chromosome 3p21.2, a gene region that undergoes alteration in solid malignant tumors.

REFERENCES

1. Ame, J.C., et al. 1999. PARP-2, a novel mammalian DNA damage-dependent poly(ADP-ribose) polymerase. J. Biol. Chem. 274: 17860-17868.
2. Still, I.H., et al. 1999. Identification of a novel gene (ADPRTL1) encoding a potential Poly(ADP-ribosyl)transferase protein. Genomics 62: 533-536.
3. Berghammer, H., et al. 1999. pADPRT-2: a novel mammalian polymerizing (ADP-ribosyl)transferase gene related to truncated pADPRT homologues in plants and *Caenorhabditis elegans*. FEBS Lett. 449: 259-263.
4. Glowacki, G., et al. 2001. Structure, chromosomal localization, and expression of the gene for mouse ecto-mono(ADP-ribosyl)transferase ART5. Gene 275: 267-277.
5. Schreiber, V., et al. 2002. Poly(ADP-ribose) polymerase-2 (PARP-2) is required for efficient base excision DNA repair in association with PARP-1 and XRCC1. J. Biol. Chem. 277: 23028-23036.
6. Augustin, A., et al. 2003. PARP-3 localizes preferentially to the daughter centriole and interferes with the G_1/S cell cycle progression. J. Cell Sci. 116: 1551-1562.
7. SWISS-PROT/TrEMBL (Q9Y6F1). World Wide Web URL: http://www. expasy.ch/sprot/sprot-top.html
8. LocusLink Report (LocusID: 10039). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: PARP3 (human) mapping to 3p21.2; Parp3 (mouse) mapping to 9 F1.

SOURCE

PARP-3 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PARP-3 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.

Blocking peptide available for competition studies, sc-30625 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

PARP-3 (N-13) is recommended for detection of PARP-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-3 siRNA (h): sc-106357, PARP-3 siRNA (m): sc-152029, PARP-3 shRNA Plasmid (h): sc-106357-SH, PARP-3 shRNA Plasmid (m): sc-152029-SH, PARP-3 shRNA (h) Lentiviral Particles: sc-106357-V and PARP-3 shRNA (m) Lentiviral Particles: sc-152029-V.

Molecular Weight of PARP-3: 60 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, mouse spleen extract: sc-2391 or mouse kidney extract: sc-2255.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Loseva, O., et al. 2010. PARP-3 is a mono-ADP-ribosylase that activates PARP-1 in the absence of DNA. J. Biol. Chem. 285: 8054-8060.

STORAGE

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

PROTOCOLS

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