SANTA CRUZ BIOTECHNOLOGY, INC.

PARP-16 (I-19): sc-82978

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Poly(ADP-ribosylation) is a method of DNA damage-dependent posttranslational modification that helps to rescue injured proliferating cells from cell death. The PARP (poly [ADP-ribose] polymerase) proteins comprise a superfamily of enzymes that functionally modify histones and other nuclear proteins, thereby preventing cell death. PARPs use NAD^+ as a substrate to catalytically transfer ADP-ribose residues onto protein acceptors; a process that, when repeated multiple times, leads to the formation of poly(ADP-ribose) chains on the protein. The presence of these chains alters the function of the target protein and promotes cell survival. PARP proteins are implicated in a variety of diseases, including cancer, neurodegenerative and inflammatory disorders. PARP-16 is a 322 amino acid poly(ADP-ribose) polymerase protein localized to the membrane. Expressed as three isoforms produced by alternative splicing, PARP-16 contains one PARP catalytic domain.

REFERENCES

1. Hans, M.A., et al. 1999. Overexpression of dominant negative PARP interferes with tumor formation of HeLa cells in nude mice: evidence for increased tumor cell apoptosis *in vivo*. Oncogene 18: 7010-7015.
2. Amé, J.C., et al. 2004. The PARP superfamily. Bioessays 26: 882-893.
3. Aguiar, R.C., et al. 2005. B-aggressive lymphoma family proteins have unique domains that modulate transcription and exhibit poly(ADP-ribose) polymerase activity. J. Biol. Chem. 280: 33756-33765.
4. Chou, H.Y., et al. 2006. CDK-dependent activation of poly(ADP-ribose) polymerase member 10 (PARP-10). J. Biol. Chem. 281: 15201-15207.
5. Goenka, S., et al. 2007. Collaborator of Stat6 (CoaSt6)-associated poly(ADP-ribose) polymerase activity modulates Stat6-dependent gene transcription. J. Biol. Chem. 282: 18732-18739.
6. Liu, X., et al. 2008. Poly(ADP-ribose) polymerase activity regulates apoptosis in HeLa cells after alkylating DNA damage. Cancer Biol. Ther. 7: 934-941.

CHROMOSOMAL LOCATION

Genetic locus: PARP16 (human) mapping to 15q22.31; Parp16 (mouse) mapping to 9 C.

SOURCE

PARP-16 (I-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PARP-16 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-82978 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-82978 X, 200 µg/0.1 ml.

APPLICATIONS

PARP-16 (I-19) is recommended for detection of PARP-16 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); non cross-reactive with other PARP family members.

PARP-16 (I-19) is also recommended for detection of PARP-16 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PARP-16 siRNA (h): sc-76060, PARP-16 siRNA (m): sc-76061, PARP-16 shRNA Plasmid (h): sc-76060-SH, PARP-16 shRNA Plasmid (m): sc-76061-SH, PARP-16 shRNA (h) Lentiviral Particles: sc-76060-V and PARP-16 shRNA (m) Lentiviral Particles: sc-76061-V.

PARP-16 (I-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

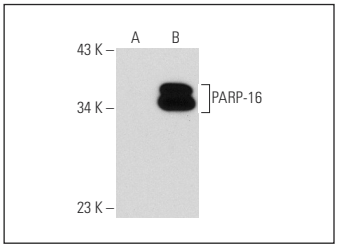
Molecular Weight of PARP-16: 36 kDa.

Positive Controls: PARP-16 (m): 293T Lysate: sc-122385.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



PARP-16 (I-19): sc-82978. Western blot analysis of PARP-16 expression in non-transfected: sc-117752 (**A**) and mouse PARP-16 transfected: sc-122385 (**B**) 293T 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.