SANTA CRUZ BIOTECHNOLOGY, INC.

PARP-7 (C-16): sc-74808

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(ADPribose) 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-7 (poly [ADP-ribose] polymerase 7), also designated RM1, DDF1, PARP-1, pART14 or TIPARP, is a 657 amino acid protein containing a C_3H_1-type zinc finger, a PARP catalytic domain and a WWE 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. 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.
3. Chou, H.Y., et al. 2006. CDK-dependent activation of poly(ADP-ribose) polymerase member 10 (PARP-10). J. Biol. Chem. 281: 15201-15207.
4. 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.
5. 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: TIPARP (human) mapping to 3q25.31; Tiparp (mouse) mapping to 3 E1.

SOURCE

PARP-7 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PARP-7 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-74808 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

PARP-7 (C-16) is recommended for detection of PARP-7 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).

PARP-7 (C-16) is also recommended for detection of PARP-7 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PARP-7 siRNA (h): sc-76064, PARP-7 siRNA (m): sc-76065, PARP-7 shRNA Plasmid (h): sc-76064-SH, PARP-7 shRNA Plasmid (m): sc-76065-SH, PARP-7 shRNA (h) Lentiviral Particles: sc-76064-V and PARP-7 shRNA (m) Lentiviral Particles: sc-76065-V.

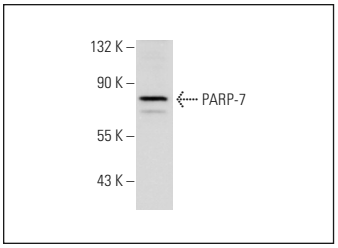
Molecular Weight of PARP-7: 76 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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-7 (C-16): sc-74808. Western blot analysis of PARP-7 expression in HeLa whole cell lysate.

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.