

PARP-10 (6D643): sc-71851

BACKGROUND

Poly(ADP-ribose) polymerase-1 (PARP-1), also designated PARP, is a nuclear DNA-binding, zinc finger protein that influences DNA repair, DNA replication, modulation of chromatin structure and apoptosis. In response to genotoxic stress, PARP-1 catalyzes the transfer of ADP-ribose units from NAD⁺ to a number of acceptor molecules, including chromatin. PARP-1 recognizes DNA strand interruptions, can complex with RNA, and negatively regulates transcription. Actinomycin D- and etoposide-dependent induction of caspases mediates cleavage of PARP-1 into a p89 fragment that traverses into the cytoplasm. PARP-10 is a PARP enzyme that is involved in the control of cell proliferation. PARP-10 localizes to the nuclear and cytoplasmic compartments, where it inhibits c-Myc- and E1A-mediated fibroblast cotransformation.

REFERENCES

1. Kaufmann, S.H., et al. 1993. Specific proteolytic cleavage of poly(ADP-ribose) polymerase: an early marker of chemotherapy-induced apoptosis. *Cancer Res.* 53: 3976-3985.
2. Lazebnik, Y.A., et al. 1994. Cleavage of poly(ADP-ribose) polymerase by a proteinase with properties like ICE. *Nature* 371: 346-347.
3. Darmon, A.J., et al. 1995. Activation of the apoptotic protease CPP32 by cytotoxic T-cell-derived granzyme B. *Nature* 377: 446-448.
4. Wang, Z.Q., et al. 1997. PARP is important for genomic stability but dispensable in apoptosis. *Genes Dev.* 11: 2347-2358.
5. Jeggo, P.A. 1998. DNA repair: PARP-another guardian angel? *Curr. Biol.* 8: R49-R51.
6. d'Adda di Fagagna, F., et al. 1999. Functions of poly(ADP-ribose) polymerase in controlling telomere length and chromosomal stability. *Nat. Genet.* 23: 76-80.
7. Beneke, R., et al. 2000. DNA excision repair and DNA damage-induced apoptosis are linked to poly(ADP-ribosylation) but have different requirements for p53. *Mol. Cell. Biol.* 20: 6695-6703.
8. Vispe, S., et al. 2000. A cellular defense pathway regulating transcription through poly(ADP-ribosylation) in response to DNA damage. *Proc. Natl. Acad. Sci. USA* 97: 9886-9891.
9. Davidovic, L., et al. 2001. Importance of poly(ADP-ribose) glycohydrolase in the control of poly(ADP-ribose) metabolism. *Exp. Cell Res.* 268: 7-13.

CHROMOSOMAL LOCATION

Genetic locus: PARP10 (human) mapping to 8q24.3; Parp10 (mouse) mapping to 15 D3.

SOURCE

PARP-10 (6D643) is a rat monoclonal antibody raised against PARP-10 of human origin.

PRODUCT

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

APPLICATIONS

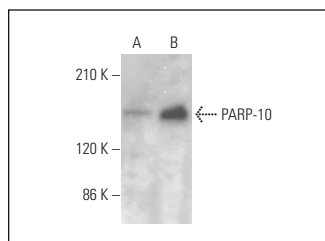
PARP-10 (6D643) is recommended for detection of PARP-10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for PARP-10 siRNA (h): sc-63306, PARP-10 siRNA (m): sc-148948, PARP-10 shRNA Plasmid (h): sc-63306-SH, PARP-10 shRNA Plasmid (m): sc-148948-SH, PARP-10 shRNA (h) Lentiviral Particles: sc-63306-V and PARP-10 shRNA (m) Lentiviral Particles: sc-148948-V.

Molecular Weight of PARP-10: 150 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, A2058 whole cell lysate: sc-364178 or HEK293 whole cell lysate: sc-45136.

DATA



PARP-10 (6D643): sc-71851. Western blot analysis of PARP-10 expression in A2058 (A) and Sol8 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Gao, G., et al. 2015. Poly (ADP-ribose) polymerase- and cytochrome c-mediated apoptosis induces hepatocyte injury in a rat model of hyperammonia-induced hepatic failure. *Mol. Med. Rep.* 11: 4211-4219.

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.

PROTOCOLS

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