SANTA CRUZ BIOTECHNOLOGY, INC.

PARP-10 (E-18): sc-74801

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. 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.
2. Beneke, R., et al. 2000. DNA excision repair and DNA damage-induced apoptosis are linked to poly(ADP-ribosyl)ation but have different requirements for p53. Mol. Cell. Biol. 20: 6695-6703.
3. Vispe, S., et al. 2000. A cellular defense pathway regulating transcription through poly(ADP-ribosyl)ation in response to DNA damage. Proc. Natl. Acad. Sci. USA 97: 9886-9891.
4. 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.
5. 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.
6. Hagberg, H., et al. 2004. PARP-1 gene disruption in mice preferentially protects males from perinatal brain injury. J. Neurochem. 90: 1068-1075.
7. Martin-Oliva, D., et al. 2004. Crosstalk between PARP-1 and NFκB modulates the promotion of skin neoplasia. Oncogene 23: 5275-5283.
8. Zaniolo, K., et al. 2005. Regulation of the poly(ADP-ribose) polymerase-1 gene expression by the transcription factors Sp1 and Sp3 is under the influence of cell density in primary cultured cells. Biochem. J. 389: 423-433.

CHROMOSOMAL LOCATION

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

SOURCE

PARP-10 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PARP-10 of human origin.

STORAGE

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

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-74801 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PARP-10 (E-18) is recommended for detection of PARP-10 of mouse 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).

PARP-10 (E-18) is also recommended for detection of PARP-10 in additional species, including bovine and porcine.

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: HEK293 whole cell lysate: sc-45136.

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.

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.