SANTA CRUZ BIOTECHNOLOGY, INC.

PARP-10 (5H11): sc-53858

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. 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.

CHROMOSOMAL LOCATION

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

SOURCE

PARP-10 (5H11) is a rat monoclonal antibody raised against PARP-10 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PARP-10 (5H11) is available conjugated to agarose (sc-53858 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-53858 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53858 PE), fluorescein (sc-53858 FITC), Alexa Fluor® 488 (sc-53858 AF488), Alexa Fluor® 546 (sc-53858 AF546), Alexa Fluor® 594 (sc-53858 AF594) or Alexa Fluor® 647 (sc-53858 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53858 AF680) or Alexa Fluor® 790 (sc-53858 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

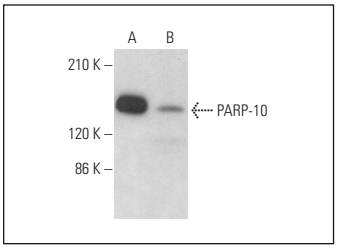
PARP-10 (5H11) is recommended for detection of PARP-10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution 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: AT3B-1 whole cell lysate: sc-364372, HEK293 whole cell lysate: sc-45136 or MDA-MB-231 cell lysate: sc-2232.

DATA



PARP-10 (5H11): sc-53858. Western blot analysis of PARP-10 expression in AT3B-1 (**A**) and MDA-MB-231 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Gao, X.Q., et al. 2020. The piRNA CHAPIR regulates cardiac hypertrophy by controlling METTL3-dependent N^6-methyladenosine methylation of Parp10 mRNA. Nat. Cell Biol. 22: 1319-1331.
2. Di Paola, S., et al. 2022. PARP10 mediates mono-ADP-ribosylation of aurora-A regulating G_2/M transition of the cell cycle. Cancers 14: 5210.

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.