SANTA CRUZ BIOTECHNOLOGY, INC.

cleaved PARP (h215)-R: sc-23461-R

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 and can complex with RNA and negatively regulate transcription. Actinomycin D- and etoposide-dependent induction of caspases mediates cleavage of PARP-1 into a p89 fragment that traverses into the cytoplasm. Apoptosis-inducing factor (AIF) translocation from the mitochondria to the nucleus is PARP-1-dependent and is necessary for PARP-1-dependent cell death. PARP-1 deficiencies lead to chromosomal instability due to higher frequencies of chromosome fusions and aneuploidy, suggesting that poly(ADP-ribosyl)ation contributes to the efficient maintenance of genome integrity.

CHROMOSOMAL LOCATION

Genetic locus: PARP1 (human) mapping to 1q42.12.

SOURCE

cleaved PARP (h215)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing the neoepitope at Gly 215 of PARP of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23461 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.

PROTOCOLS

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

APPLICATIONS

cleaved PARP (h215)-R is recommended for detection of 85 kDa apoptotic fragment of PARP of 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); non cross-reactive with 112 kDa or 29 kDa forms.

Suitable for use as control antibody for PARP-1 siRNA (h): sc-29437, PARP-1 shRNA Plasmid (h): sc-29437-SH and PARP-1 shRNA (h) Lentiviral Particles: sc-29437-V.

Molecular Weight of cleaved PARP: 85 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Zhang, C.Z., et al. 2011. Trichostatin A sensitizes HBx-expressing liver cancer cells to etoposide treatment. Apoptosis 16: 683-695.
2. Chien, M.H., et al. 2012. Lipocalin-2 induces apoptosis in human hepatocellular carcinoma cells through activation of mitochondria pathways. Cell Biochem. Biophys. 64: 177-186.
3. Fang, E.F., et al. 2012. Trichosanthin inhibits breast cancer cell proliferation in both cell lines and nude mice by promotion of apoptosis. PLoS ONE 7: e41592.
4. Fang, E.F., et al. 2012. The MAP30 protein from bitter gourd *(Momordica charantia)* seeds promotes apoptosis in liver cancer cells *in vitro* and *in vivo*. Cancer Lett. 324: 66-74.
5. Fang, E.F., et al. 2012. *In vitro* and *in vivo* anticarcinogenic effects of RNase MC2, a ribonuclease isolated from dietary bitter gourd, toward human liver cancer cells. Int. J. Biochem. Cell Biol. 44: 1351-1360.
6. Fang, E.F., et al. 2012. RNase MC2: a new *Momordica charantia* ribonuclease that induces apoptosis in breast cancer cells associated with activation of MAPKs and induction of caspase pathways. Apoptosis 17: 377-387.
7. Song, T., et al. 2013. S1 kills MCF-7/ADR cells more than MCF-7 cells: a protective mechanism of endoplasmic reticulum stress. Biomed. Pharmacother. 67: 731-736.
8. Ou, J., et al. 2013. Fibronectin extra domain A (EDA) sustains $CD133^+$/$CD44^+$ subpopulation of colorectal cancer cells. Stem Cell Res. 11: 820-833.
9. Costa, M.A., et al. 2015. The endocannabinoid anandamide induces apoptosis in cytotrophoblast cells: Involvement of both mitochondrial and death receptor pathways. Placenta 36: 69-76.

RESEARCH USE

For research use only, not for use in diagnostic procedures.