SANTA CRUZ BIOTECHNOLOGY, INC.

PARG (R-16): sc-21481

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The synthesis and rapid turnover of ADP-ribose polymers is an immediate cellular response to DNA damage. Poly(ADP-ribose) is a reversible covalent-modifier to chromosomal proteins and is synthesized by poly(ADP-ribose) polymerase (PARP-1) and other related enzymes. Poly(ADP-ribose) glycohydrolase (PARG) is the enzyme responsible for polymer turnover. Under normal growth conditions, PARG localizes to the cytoplasm. PARG is an enzymatically active protein that is cleaved to multiple fragments. PARG is cleaved during etoposide-, staurosporine-, and Fas-induced apoptosis in human cells by caspases, and generates two C-terminal fragments, which still contain the active site of the enzyme required to hydrolyze poly(ADP-ribose). Under normal growth, PARG is expressed only as a doublet by SDS-PAGE. The gene encoding PARG maps to human chromosome 10q11.23.

REFERENCES

1. Lin, W., et al. 1997. Isolation and characterization of the cDNA encoding bovine poly(ADP-ribose) glycohydrolase. J. Biol. Chem. 272: 11895-11901.
2. Winstall, E., et al. 1999. Poly(ADP-ribose) glycohydrolase is present and active in mammalian cells as a 110-kDa protein. Exp. Cell Res. 246: 395-398.
3. D'Amours, D., et al. 1999. Poly(ADP-ribosyl)ation reactions in the regulation of nuclear functions. Biochem. J. 342: 249-268.
4. Ame, J.C., et al. 1999. Assignment of poly(ADP-ribose) glycohydrolase gene (PARG) to human chromosome 10q11.23 and mouse chromosome 14B by *in situ* hybridization. Cytogenet. Cell Genet. 85: 269-270.
5. Affar, E.B., et al. 2001. Caspase-3-mediated processing of poly(ADP-ribose) glycohydrolase during apoptosis. J. Biol. Chem. 276: 2935-2942.

CHROMOSOMAL LOCATION

Genetic locus: PARG (human) mapping to 10q11.23; Parg (mouse) mapping to 14 B.

SOURCE

PARG (R-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PARG of rat 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-21481 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

PARG (R-16) is recommended for detection of PARG of mouse, rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

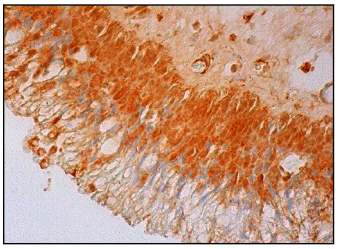
Suitable for use as control antibody for PARG siRNA (h): sc-106355, PARG siRNA (m): sc-152026, PARG shRNA Plasmid (h): sc-106355-SH, PARG shRNA Plasmid (m): sc-152026-SH, PARG shRNA (h) Lentiviral Particles: sc-106355-V and PARG shRNA (m) Lentiviral Particles: sc-152026-V.

Molecular Weight of PARG isoforms: 110/60 kDa.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



PARG (R-16): sc-21481. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing cytoplasmic and nuclear staining of respiratory epithelial cells.

RESEARCH USE

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