SANTA CRUZ BIOTECHNOLOGY, INC.

PARG (O-23): sc-130835

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., Ame, J.C., Aboul-Ela, N., Jacobson, E.L. and Jacobson, M.K. 1997. Isolation and characterization of the cDNA encoding bovine poly(ADP-ribose) glycohydrolase. J. Biol. Chem. 272: 11895-11901.
2. D'Amours, D., Desnoyers, S., D'Silva, I. and Poirier, G.G. 1999. Poly(ADP-ribosyl)ation reactions in the regulation of nuclear functions. Biochem. J. 342: 249-268.
3. Ame, J.C., Apiou, F., Jacobson, E.L. and Jacobson, M.K. 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.
4. Winstall, E., Affar, E.B., Shah, R., Bourassa, S., Scovassi, A.I. and Poirier, G.G. 1999. Poly(ADP-ribose) glycohydrolase is present and active in mammalian cells as a 110 kDa protein. Exp. Cell Res. 246: 395-398.
5. Affar, E.B., Germain, M., Winstall, E., Vodenicharov, M., Shah, R.G., Salvesen, G.S. and Poirier, G.G. 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.

SOURCE

PARG (O-23) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of PARG of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

PARG (O-23) is recommended for detection of PARG 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), 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).

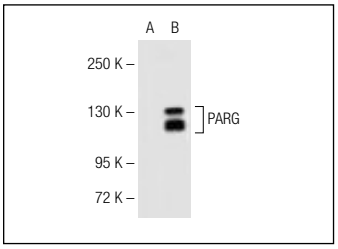
Suitable for use as control antibody for PARG siRNA (h): sc-106355, PARG shRNA Plasmid (h): sc-106355-SH and PARG shRNA (h) Lentiviral Particles: sc-106355-V.

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 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



PARG (O-23): sc-130835. Western blot analysis of PARG expression in non-transfected (**A**) and human PARG transfected (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Williams, B.L., et al. 2008. Hippocampal poly(ADP-Ribose) polymerase 1 and caspase 3 activation in neonatal bornavirus infection. J. Virol. 82: 1748-1758.

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.