

PARP-12 (E-20): sc-74806

BACKGROUND

Poly(ADP-ribosylation) is a method of DNA damage-dependent posttranslational modification that helps to rescue injured proliferating cells from cell death. The PARP (poly(ADP-ribose) polymerase) proteins comprise a superfamily of enzymes that functionally modify histones and other nuclear proteins, thereby preventing cell death. PARPs use NAD⁺ as a substrate to catalytically transfer ADP-ribose residues onto protein acceptors; a process that, when repeated multiple times, leads to the formation of poly(ADP-ribose) chains on the protein. The presence of these chains alters the function of the target protein and promotes cell survival. PARP proteins are implicated in a variety of diseases, including cancer, neurodegenerative and inflammatory disorders.

REFERENCES

- Hans, M.A., et al. 1999. Overexpression of dominant negative PARP interferes with tumor formation of HeLa cells in nude mice: evidence for increased tumor cell apoptosis *in vivo*. *Oncogene* 18: 7010-7015.
- Aguiar, R.C., et al. 2005. B-aggressive lymphoma family proteins have unique domains that modulate transcription and exhibit poly(ADP-ribose) polymerase activity. *J. Biol. Chem.* 280: 33756-33765.
- Chou, H.Y., et al. 2006. CDK-dependent activation of poly(ADP-ribose) polymerase member 10 (PARP-10). *J. Biol. Chem.* 281: 15201-15207.
- Goenka, S., et al. 2007. Collaborator of Stat6 (CoaSt6)-associated poly(ADP-ribose) polymerase activity modulates Stat6-dependent gene transcription. *J. Biol. Chem.* 282: 18732-18739.
- Liu, X., et al. 2008. Poly (ADP-ribose) polymerase activity regulates apoptosis in HeLa cells after alkylating DNA damage. *Cancer Biol. Ther.* 7: 934-941.
- Elser, M., et al. 2008. Poly(ADP-ribose) polymerase 1 promotes tumor cell survival by co-activating hypoxia-inducible factor-1-dependent gene expression. *Mol. Cancer Res.* 6: 282-290.
- Hassa, P.O. and Hottiger, M.O. 2008. The diverse biological roles of mammalian PARPs, a small but powerful family of poly-ADP-ribose polymerases. *Front. Biosci.* 13: 3046-3082.

CHROMOSOMAL LOCATION

Genetic locus: PARP12 (human) mapping to 7q34; Parp12 (mouse) mapping to 6 B1.

SOURCE

PARP-12 (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PARP-12 of human 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-74806 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PARP-12 (E-20) is recommended for detection of PARP-12 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).

PARP-12 (E-20) is also recommended for detection of PARP-12 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for PARP-12 siRNA (h): sc-76054, PARP-12 siRNA (m): sc-76055, PARP-12 shRNA Plasmid (h): sc-76054-SH, PARP-12 shRNA Plasmid (m): sc-76055-SH, PARP-12 shRNA (h) Lentiviral Particles: sc-76054-V and PARP-12 shRNA (m) Lentiviral Particles: sc-76055-V.

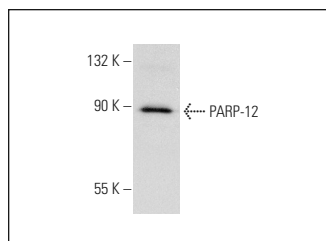
Molecular Weight of PARP-12: 79 kDa.

Positive Controls: ACHN whole cell lysate: sc-364365.

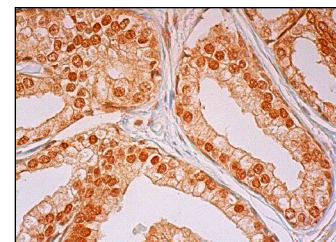
RECOMMENDED SECONDARY REAGENTS

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



PARP-12 (E-20): sc-74806. Western blot analysis of PARP-12 expression in ACHN whole cell lysate.



PARP-12 (E-20): sc-74806. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing nuclear and cytoplasmic staining of glandular cells.

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.