SANTA CRUZ BIOTECHNOLOGY, INC.

PARP-15 (D-20): sc-82973

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 and both neurodegenerative and inflammatory disorders. PARP-15, also known as BAL3, is a 656 amino acid nuclear protein containing two macro domains and a PARP catalytic domain. Considered a transcriptional repressor, PARP-15 exists as two isoforms produced by alternative splicing events.

REFERENCES

1. 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.
2. 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.
3. Chou, H.Y., et al. 2006. CDK-dependent activation of poly(ADP-ribose) polymerase member 10 (PARP-10). J. Biol. Chem. 281: 15201-15207.
4. 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.
5. 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.
6. Elser, M., et al. 2008. Poly(ADP-ribose) polymerase 1 promotes tumor cell survival by coactivating hypoxia-inducible factor-1-dependent gene expression. Mol. Cancer Res. 6: 282-290.
7. 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: PARP15 (human) mapping to 3q21.1.

SOURCE

PARP-15 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PARP-15 of human origin.

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.

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-82973 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-82973 X, 200 µg/0.1 ml.

APPLICATIONS

PARP-15 (D-20) is recommended for detection of PARP-15 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 other PARP family members.

Suitable for use as control antibody for PARP-15 siRNA (h): sc-76058, PARP-15 shRNA Plasmid (h): sc-76058-SH and PARP-15 shRNA (h) Lentiviral Particles: sc-76058-V.

PARP-15 (D-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of PARP-15: 73 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.

PROTOCOLS

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