

PARP-3 (h): 293 Lysate: sc-158814

BACKGROUND

Poly(ADP-ribose) polymerase-3 (PARP-3) is part of the base excision repair (BER) pathway, catalyzing the poly(ADP-ribosyl)ation of nuclear proteins. Poly(ADP-ribosyl)ation, a post-translational modification following DNA damage, appears as an obligatory step in a detection/signaling pathway leading to the reparation of DNA strand breaks. PARP-3 is a nuclear, DNA-binding protein, which interacts with PARP-1. PARP-3 is present in actively dividing tissues with highest levels in the kidney, skeletal muscle, liver, heart and spleen. Human PARP-3 maps to chromosome 3p21.1, a gene region that undergoes alteration in solid malignant tumors.

REFERENCES

1. Ame, J.C., Rolli, V., Schreiber, V., Niedergang, C., Apiou, F., Decker, P., Muller, S., Höger, T., Ménissier-de Murcia, J. and de Murcia, G. 1999. PARP-2, a novel mammalian DNA damage-dependent poly(ADP-ribose) polymerase. *J. Biol. Chem.* 274: 17860-17868.
2. Still, I.H., Vince, P. and Cowell, J.K. 1999. Identification of a novel gene (ADPRTL1) encoding a potential Poly(ADP-ribosyl)transferase protein. *Genomics* 62: 533-536.
3. Berghammer, H., Ebner, M., Marksteiner, R. and Auer, B. 1999. pADPRT-2: a novel mammalian polymerizing (ADP-ribosyl)transferase gene related to truncated pADPRT homologues in plants and *Caenorhabditis elegans*. *FEBS Lett.* 449: 259-263.
4. Glowacki, G., Braren, R., Cetkovic-Cvrlje, M., Leiter, E.H., Haag, F. and Koch-Nolte, F. 2001. Structure, chromosomal localization, and expression of the gene for mouse ecto-mono(ADP-ribosyl)transferase ART5. *Gene* 275: 267-277.
5. Schreiber, V., Amé, J.C., Dollé, P., Schultz, I., Rinaldi, B., Fraulob, V., Ménissier-de Murcia, J. and de Murcia, G. 2002. Poly(ADP-ribose) polymerase-2 (PARP-2) is required for efficient base excision DNA repair in association with PARP-1 and XRCC1. *J. Biol. Chem.* 277: 23028-23036.
6. Augustin, A., Spenlehauer, C., Dumond, H., Ménissier-De Murcia, J., Piel, M., Schmit, A.C., Apiou, F., Vonesch, J.L., Kock, M., Bornens, M. and De Murcia, G. 2003. PARP-3 localizes preferentially to the daughter centriole and interferes with the G₁/S cell cycle progression. *J. Cell Sci.* 116: 1551-1562.
7. LocusLink Report (LocusID: 10039). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: PARP3 (human) mapping to 3p21.2.

PRODUCT

PARP-3 (h): 293 Lysate represents a lysate of human PARP-3 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

PARP-3 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive PARP-3 antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

RESEARCH USE

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

PROTOCOLS

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