SANTA CRUZ BIOTECHNOLOGY, INC.

PARP-2 (F-8): sc-393343

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Poly(ADP-ribose) polymerase-2 (PARP-2) is part of the base excision repair (BER) pathway, catalyzing the poly(ADP-ribosy)lation 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-2 is a nuclear, DNA-binding protein, which interacts with PARP-1. PARP-2 is present in actively dividing tissues with highest levels in the kidney, skeletal muscle, liver, heart and spleen. Human PARP-2 maps to chromosome 14q11.2.

REFERENCES

1. Ame, J.C., et al. 1999. PARP-2, a novel mammalian DNA damage-dependent poly(ADP-ribose) polymerase. J. Biol. Chem. 274: 17860-17868.
2. Schreiber, V., et al. 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.
3. Menissier de Murcia, J., et al. 2003. Functional interaction between PARP-1 and PARP-2 in chromosome stability and embryonic development in mouse. EMBO J. 9: 2255-2263.
4. Curtin, N.J. 2005. PARP inhibitors for cancer therapy. Expert Rev. Mol. Med. 7: 1-20.
5. Iwashita, A., et al. 2005. Discovery of quinazolinone and quinoxaline derivatives as potent and selective poly(ADP-ribose) polymerase-1/2 inhibitors. FEBS Lett. 579: 1389-1393.
6. Meder, V.S., et al. 2005. PARP-1 and PARP-2 interact with nucleophosmin/B23 and accumulate in transcriptionally active nucleoli. J. Cell Sci. 118: 211-222.
7. LocusLink Report (LocusID: 10038). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: PARP2 (human) mapping to 14q11.2; Parp2 (mouse) mapping to 14 C1.

SOURCE

PARP-2 (F-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 105-148 near the N-terminus of PARP-2 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393343 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

PARP-2 (F-8) is recommended for detection of PARP-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for PARP-2 siRNA (h): sc-106356, PARP-2 siRNA (m): sc-152028, PARP-2 shRNA Plasmid (h): sc-106356-SH, PARP-2 shRNA Plasmid (m): sc-152028-SH, PARP-2 shRNA (h) Lentiviral Particles: sc-106356-V and PARP-2 shRNA (m) Lentiviral Particles: sc-152028-V.

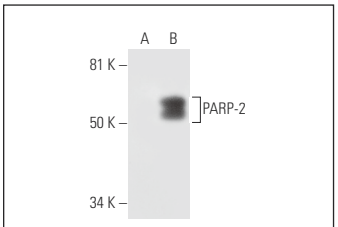
Molecular Weight of PARP-2: 62 kDa.

Positive Controls: PARP-2 (m): 293T Lysate: sc-122386.

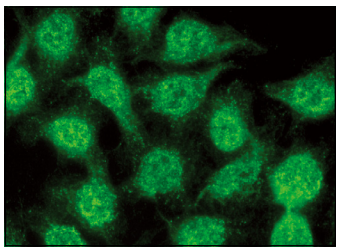
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PARP-2 (F-8): sc-393343. Western blot analysis of PARP-2 expression in non-transfected: sc-117752 (**A**) and mouse PARP-2 transfected: sc-122386 (**B**) 293T whole cell lysates.



PARP-2 (F-8): sc-393343. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Caracciolo, D., et al. 2020. Exploiting Myc-induced PARPness to target genomic instability in multiple myeloma. Haematologica 106: 185-195.

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.