SANTA CRUZ BIOTECHNOLOGY, INC.

PARP-3 (B-7): sc-390771

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 3p21.2, a gene region that undergoes alteration in solid malignant tumors.

CHROMOSOMAL LOCATION

Genetic locus: PARP3 (human) mapping to 3p21.2; Parp3 (mouse) mapping to 9 F1.

SOURCE

PARP-3 (B-7) is a mouse monoclonal antibody raised against amino acids 139-219 mapping within an internal region of PARP-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-390771 X, 200 µg/0.1 ml.

PARP-3 (B-7) is available conjugated to agarose (sc-390771 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390771 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390771 PE), fluorescein (sc-390771 FITC), Alexa Fluor® 488 (sc-390771 AF488), Alexa Fluor® 546 (sc-390771 AF546), Alexa Fluor® 594 (sc-390771 AF594) or Alexa Fluor® 647 (sc-390771 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390771 AF680) or Alexa Fluor® 790 (sc-390771 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PARP-3 (B-7) is recommended for detection of PARP-3 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-3 siRNA (h): sc-106357, PARP-3 siRNA (m): sc-152029, PARP-3 shRNA Plasmid (h): sc-106357-SH, PARP-3 shRNA Plasmid (m): sc-152029-SH, PARP-3 shRNA (h) Lentiviral Particles: sc-106357-V and PARP-3 shRNA (m) Lentiviral Particles: sc-152029-V.

PARP-3 (B-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

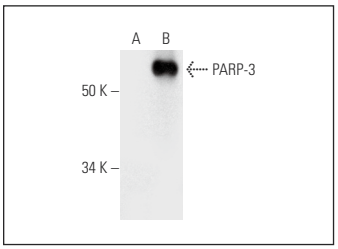
Molecular Weight of PARP-3: 60 kDa.

Positive Controls: PARP-3 (m3): 293T Lysate: sc-122389 or PC-12 cell lysate: sc-2250.

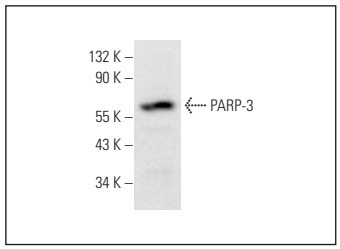
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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-3 (B-7): sc-390771. Western blot analysis of PARP-3 expression in non-transfected: sc-117752 (**A**) and mouse PARP-3 transfected: sc-122389 (**B**) 293T whole cell lysates.



PARP-3 (B-7): sc-390771. Western blot analysis of PARP-3 expression in PC-12 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Guo, L. and Yang, T. 2019. Oxymatrine inhibits the proliferation and invasion of breast cancer cells via the PI3K pathway. Cancer Manag. Res. 11: 10499-10508.
2. Maertens, O., et al. 2019. MAPK pathway suppression unmasks latent DNA repair defects and confers a chemical synthetic vulnerability in BRAF-, NRAS-, and NF1-mutant melanomas. Cancer Discov. 9: 526-545.
3. Li, G., et al. 2021. p53 deficiency induces MTHFD2 transcription to promote cell proliferation and restrain DNA damage. Proc. Natl. Acad. Sci. USA 118: e2019822118.
4. Chan, C.Y., et al. 2022. Imaging PARP with [^{18}F]rucaparib in pancreatic cancer models. Eur. J. Nucl. Med. Mol. Imaging 49: 3668-3678.
5. Li, H., et al. 2023. Haploinsufficiency of ZNF251 causes DNA-PKcs-dependent resistance to PARP inhibitors in BRCA1-mutated cancer cells. Res. Sq. E-published.

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.