SANTA CRUZ BIOTECHNOLOGY, INC.

PARP-2 (F-3): sc-393310

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.

CHROMOSOMAL LOCATION

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

SOURCE

PARP-2 (F-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 103-138 near the N-terminus of PARP-2 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.

PARP-2 (F-3) is available conjugated to agarose (sc-393310 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393310 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393310 PE), fluorescein (sc-393310 FITC), Alexa Fluor® 488 (sc-393310 AF488), Alexa Fluor® 546 (sc-393310 AF546), Alexa Fluor® 594 (sc-393310 AF594) or Alexa Fluor® 647 (sc-393310 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393310 AF680) or Alexa Fluor® 790 (sc-393310 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393310 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

PARP-2 (F-3) 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.

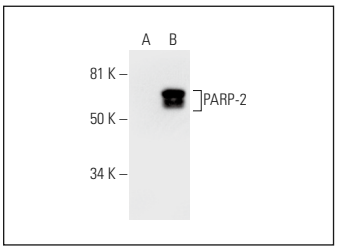
Molecular Weight of PARP-2: 62 kDa.

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 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-2 (F-3): sc-393310. 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.

SELECT PRODUCT CITATIONS

1. Ke, Y., et al. 2017. PARP-1 promotes gene expression at the post-transcriptiona level by modulating the RNA-binding protein HuR. Nat. Commun. 8: 14632.
2. Ke, Y., et al. 2017. Erratum: PARP-1 promotes gene expression at the post-transcriptional level by modulating the RNA-binding protein HuR. Nat. Commun. 8: 15191.
3. Sorensen, J.C., et al. 2017. BGP-15 protects against oxaliplatin-induced skeletal myopathy and mitochondrial reactive oxygen species production in mice. Front. Pharmacol. 8: 137.
4. Zhang, X.N., et al. 2019. A ribose-functionalized NAD^+ with unexpected high activity and selectivity for protein poly-ADP-ribosylation. Nat. Commun. 10: 4196.
5. Sun, C., et al. 2023. NAD depletion mediates cytotoxicity in human neurons with autophagy deficiency. Cell Rep. 42: 112372.
6. 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.