

PRC (B-8): sc-376431

BACKGROUND

PGC-1-related coactivator (PRC), also known as peroxisome proliferator-activated receptor γ coactivator-related protein 1, is a 1,664 amino acid nuclear protein. PRC is involved in the coactivation of nuclear genes involved in mitochondrial biogenesis and cell growth. PRC acts as a transcriptional coactivator of CREB-1 and NRF-1 by interacting directly with CREB-1 and NRF-1 genes. Up-regulated by serum, PRC is present at high levels in skeletal muscle and heart and at moderate levels in kidney, spleen, thymus, intestine, placenta, lung, brain and colon. PRC has one RNA recognition motif (RRM) domain, which can bind directly to RNA. PRC exists as two named isoforms produced by alternative splicing.

REFERENCES

- Andersson, U. and Scarpulla, R.C. 2001. Pgc-1-related coactivator, a novel, serum-inducible coactivator of nuclear respiratory factor 1-dependent transcription in mammalian cells. *Mol. Cell. Biol.* 21: 3738-3749.
- Savagner, F., et al. 2003. PGC-1-related coactivator and targets are upregulated in thyroid oncocyoma. *Biochem. Biophys. Res. Commun.* 310: 779-784.
- Finck, B.N. and Kelly, D.P. 2006. PGC-1 coactivators: inducible regulators of energy metabolism in health and disease. *J. Clin. Invest.* 116: 615-622.
- Vercauteren, K., et al. 2006. PGC-1-related coactivator: immediate early expression and characterization of a CREB/NRF-1 binding domain associated with cytochrome c promoter occupancy and respiratory growth. *Mol. Cell. Biol.* 26: 7409-7419.
- Srivastava, S., et al. 2007. PGC-1 α/β upregulation is associated with improved oxidative phosphorylation in cells harboring nonsense mtDNA mutations. *Hum. Mol. Genet.* 16: 993-1005.

CHROMOSOMAL LOCATION

Genetic locus: PPRC1 (human) mapping to 10q24.32.

SOURCE

PRC (B-8) is a mouse monoclonal antibody raised against amino acids 63-226 mapping near the N-terminus of PRC of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-376431 X, 200 μ g/0.1 ml.

PRC (B-8) is available conjugated to agarose (sc-376431 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376431 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376431 PE), fluorescein (sc-376431 FITC), Alexa Fluor[®] 488 (sc-376431 AF488), Alexa Fluor[®] 546 (sc-376431 AF546), Alexa Fluor[®] 594 (sc-376431 AF594) or Alexa Fluor[®] 647 (sc-376431 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376431 AF680) or Alexa Fluor[®] 790 (sc-376431 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PRC (B-8) is recommended for detection of PRC of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 PRC siRNA (h): sc-90572, PRC shRNA Plasmid (h): sc-90572-SH and PRC shRNA (h) Lentiviral Particles: sc-90572-V.

PRC (B-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

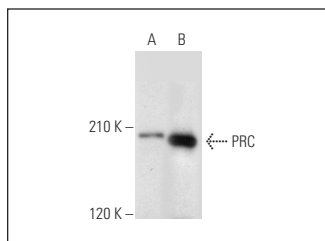
Molecular Weight of PRC: 177 kDa.

Positive Controls: human heart extract: sc-363763 or human skeletal muscle extract: sc-363776.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



PRC (B-8): sc-376431. Western blot analysis of PRC expression in human heart (A) and human skeletal muscle (B) tissue extracts.

SELECT PRODUCT CITATIONS

- Shi, D., et al. 2021. An isocaloric moderately high-fat diet extends lifespan in male rats and *Drosophila*. *Cell Metab.* 33: 581-597.e9.

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.