

PRC (Q-15): sc-135516

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; Pprc1 (mouse) mapping to 19 C3.

SOURCE

PRC (Q-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of PRC of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-135516 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

PRC (Q-15) is recommended for detection of PRC isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other PRC family members.

PRC (Q-15) is also recommended for detection of PRC isoforms 1 and 2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PRC siRNA (h): sc-90572, PRC siRNA (m): sc-152443, PRC shRNA Plasmid (h): sc-90572-SH, PRC shRNA Plasmid (m): sc-152443-SH, PRC shRNA (h) Lentiviral Particles: sc-90572-V and PRC shRNA (m) Lentiviral Particles: sc-152443-V.

Molecular Weight of PRC: 177 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Philp, A., et al. 2011. The PGC-1 α -related coactivator promotes mitochondrial and myogenic adaptations in C2C12 myotubes. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 301: R864-R872.

PROTOCOLS

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



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Try **PRC (B-8): sc-376431**, our highly recommended monoclonal alternative to PRC (Q-15).