

PIMT (P-12): sc-23114

BACKGROUND

The PIMT (PRIP-interacting protein with methyltransferase domain) protein binds to the nuclear receptor co-activator PRIP (peroxisome proliferator-activated receptor (PPAR)-interacting protein), enhancing the co-activator function of PRIP. PIMT and PRIP co-localize to the nucleus. PPAR γ -induced transcription increases irrespective of singular or cotransfection of PIMT and PRIP. PIMT enhances the PBP-mediated transcriptional activity of PPAR γ and represses the CBP/p300-mediated transactivation of PPAR γ . PIMT also binds and co-localizes to the nucleus with the transcription activators CBP, p300 and PBP. PIMT may also be a putative RNA methyltransferase, as it binds both the methyl donor for the methyltransfer reaction (S-adenosyl-L-methionine) and RNA. The human PIMT gene maps to chromosome 8q11 and encodes a 852 amino acid protein, which is highly expressed in heart, skeletal muscle, kidney, liver and placenta. The PPAR α -interacting cofactor (PRIC) complex comprises PIMT, PRIP, CBP, PBP and more than 20 other co-activators or co-activator-binding proteins. Ciprofibrate and leukotriene B4 both induce PRIC complex-PPAR α interaction, which enhances transcription.

REFERENCES

1. Caira, F., et al. 2000. Cloning and characterization of RAP250, a novel nuclear receptor co-activator. *J. Biol. Chem.* 275: 5308-5317.
2. Zhu, Y., et al. 2000. Isolation and characterization of peroxisome proliferator-activated receptor (PPAR)-interacting protein (PRIP) as a co-activator for PPAR. *J. Biol. Chem.* 275: 13510-13516.
3. Zhu, Y., et al. 2001. Cloning and characterization of PIMT, a protein with a methyltransferase domain, which interacts with and enhances nuclear receptor co-activator PRIP function. *Proc. Natl. Acad. Sci. USA* 98: 10380-10385.
4. Misra, P., et al. 2002. Interaction of PIMT with transcriptional co-activators CBP, p300 and PBP differential role in transcriptional regulation. *J. Biol. Chem.* 277: 20011-20019.
5. Surapureddi, S., et al. 2002. Identification of a transcriptionally active peroxisome proliferator-activated receptor α -interacting cofactor complex in rat liver and characterization of PRIC285 as a co-activator. *Proc. Natl. Acad. Sci. USA* 99: 11836-11841.

CHROMOSOMAL LOCATION

Genetic locus: TGS1 (human) mapping to 8q11; Tgs1 (mouse) mapping to 4 A1.

SOURCE

PIMT (P-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PIMT of human origin.

PRODUCT

Each vial contains 200 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-23114 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PIMT (P-12) is recommended for detection of PIMT of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 PIMT siRNA (h): sc-45875 and PIMT siRNA (m): sc-45876.

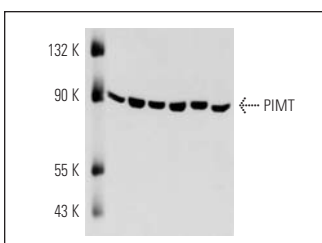
Molecular Weight of PIMT: 90 kDa.

Positive Controls: A-10 nuclear extract: sc-24959, Sol8 nuclear extract: sc-2157 or HeLa nuclear extract: sc-2120.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PIMT (P-12): sc-23114. Western blot analysis of PIMT expression in A-10 (A), Sol8 (B), KNRK (C), NIH/3T3 (D), HeLa (E) and SW480 (F) nuclear extracts.

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.

PROTOCOLS

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