SANTA CRUZ BIOTECHNOLOGY, INC.

PIMT (N-13): sc-23113

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The Power to Question

^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. PPARγ-induced transcription increases irrespective of singular or cotransfection of PIMT and PRIP. PIMT enhances the PBP-mediated transcriptional activity of PPARγ and represses the CBP/p300-mediated transactivation of PPARγ. 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 8q12.1 and encodes a 852 amino acid protein, which is highly expressed in heart, skeletal muscle, kidney, liver and placenta. The PPARα-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-PPARα 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 proliferatoractivated 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 8q12.1; Tgs1 (mouse) mapping to 4 A1.

SOURCE

PIMT (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PIMT of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23113 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PIMT (N-13) 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 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).

PIMT (N-13) is also recommended for detection of PIMT in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PIMT siRNA (h): sc-45875, PIMT siRNA (m): sc-45876, PIMT shRNA Plasmid (h): sc-45875-SH, PIMT shRNA Plasmid (m): sc-45876-SH, PIMT shRNA (h) Lentiviral Particles: sc-45875-V and PIMT shRNA (m) Lentiviral Particles: sc-45876-V.

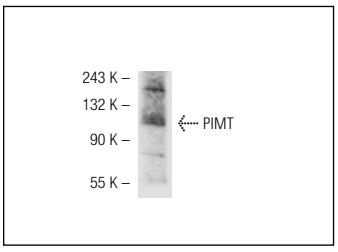
Molecular Weight of PIMT: 90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, 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 (N-13): sc-23113. Western blot analysis of PIMT expression in HeLa whole cell lysate.

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.