

PIMT (H-223): sc-99239

BACKGROUND

The PIMT (PRIP-interacting protein with methyltransferase domain) protein binds to the nuclear receptor coactivator PRIP (peroxisome proliferator-activated receptor (PPAR)-interacting protein), enhancing the coactivator function of PRIP. PIMT and PRIP co-localize to the nucleus. PPAR γ -induced transcription increases irrespective of singular or co-transfection 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 8q12.1 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 coactivators 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 8q12.1; Tgs1 (mouse) mapping to 4 A1.

SOURCE

PIMT (H-223) is a rabbit polyclonal antibody raised against amino acids 631-853 mapping at the C-terminus 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.

RESEARCH USE

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

APPLICATIONS

PIMT (H-223) 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).

PIMT (H-223) is also recommended for detection of PIMT in additional species, including canine.

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.

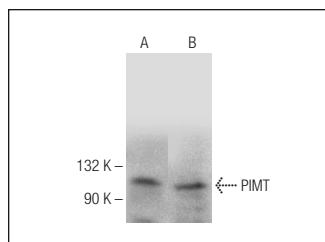
Molecular Weight of PIMT: 90 kDa.

Positive Controls: SW480 nuclear extract: sc-2155, rat testis extract: sc-2400 or HeLa nuclear extract: sc-2120.

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.

DATA



PIMT (H-223): sc-99239. Western blot analysis of PIMT expression in SW480 nuclear extract (A) and rat testis tissue extract (B).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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