

PPAR γ (H-100): sc-7196

BACKGROUND

Peroxisome proliferator-activated receptors (PPARs) are nuclear hormone receptors that can be activated by a variety of compounds including fibrates, thiazolidinediones, prostaglandins and fatty acids. Three PPAR subtypes, designated PPAR α , PPAR β (also designated PPAR δ) and PPAR γ , have been described. PPARs promote transcription by forming heterodimers with members of the retinoid X receptor (RXR) family of steroid receptors and binding to specific DNA motifs termed PPAR-response elements (PPREs). PPAR α is abundant in primary hepatocytes where it regulates the expression of proteins involved in fatty acid metabolism. PPAR β is the most widely distributed subtype and is often expressed at high levels. PPAR γ is predominantly seen in adipose tissue where it plays a critical role in regulating adipocyte differentiation. Interestingly, both the orphan nuclear hormone receptor LXR α and thyroid receptor (TR) have been shown to act as antagonists of PPAR α /RXR α binding to PPREs.

REFERENCES

1. Brun, R.P., et al. 1996. Differential activation of adipogenesis by multiple PPAR isoforms. *Genes Dev.* 10: 974-984.
2. Mansen, A., et al. 1996. Expression of the peroxisome proliferator-activated receptor (PPAR) in the mouse colonic mucosa. *Biochem. Biophys. Res. Commun.* 222: 844-851.
3. Braissant, O., et al. 1996. Differential expression of peroxisome proliferator-activated receptors (PPARs): tissue distribution of PPAR α , β , and γ in the adult rat. *Endocrinology* 137: 354-366.

CHROMOSOMAL LOCATION

Genetic locus: PPARG (human) mapping to 3p25; Pparg (mouse) mapping to 6 E3-F1.

SOURCE

PPAR γ (H-100) is a rabbit polyclonal antibody raised against amino acids 8-106 of PPAR γ 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.

Available as agarose conjugate for immunoprecipitation, sc-7196 AC, 500 μ g/0.25 ml agarose in 1 ml.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-7196 X, 200 μ g/0.1 ml.

Available as HRP conjugate for Western blotting, sc-7196 HRP, 200 μ g/1 ml.

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

PPAR γ (H-100) is recommended for detection of PPAR γ_1 and PPAR γ_2 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).

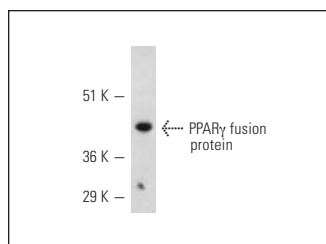
Suitable for use as control antibody for PPAR γ siRNA (h): sc-29455 and PPAR γ siRNA (m): sc-29456.

PPAR γ (H-100) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

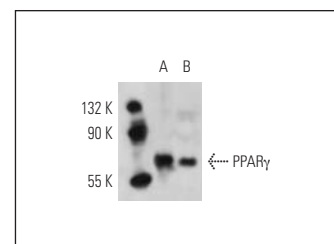
Molecular Weight of PPAR γ : 67 kDa.

Positive Controls: human breast carcinoma, rat skeletal muscle extract or U-937 cell lysate: sc-2239.

DATA



PPAR γ (H-100): sc-7196. Western blot analysis of human recombinant PPAR γ fusion protein.



PPAR γ (H-100): sc-7196. Western blot analysis of PPAR γ expression in THP-1 (A) and 3T3-L1 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Benayoun, L., et al. 2001. Regulation of peroxisome proliferator-activated receptor γ expression in human asthmatic airways. Relationship with proliferation, apoptosis, and airway remodeling. *Am. J. Respir. Crit. Care Med.* 164: 1487-1494.
2. Medvedev, A.V., et al. 2001. Transcriptional regulation of the mouse uncoupling protein-2 gene. *J. Biol. Chem.* 276: 10817-10823.
3. Huang, W.C., et al. 2002. Superoxide anion-dependent Raf/MEK/ERK activation by peroxisome proliferator activated receptor γ agonists 15-deoxy- δ (12,14)-prostaglandin J(2), ciglitazone, and GW1929. *Exp. Cell Res.* 277: 192-200.
4. Ibabe, A., et al. 2002. Expression of peroxisome proliferator-activated receptors in zebrafish (*Danio rerio*). *Histochem. Cell Biol.* 118: 231-239.
5. Boustead, J.N., et al. 2003. Hepatocyte nuclear factor-4 α mediates the stimulatory effect of peroxisome proliferator-activated receptor γ co-activator-1 α (PGC-1 α) on glucose-6-phosphatase catalytic subunit gene transcription in H4IIE cells. *Biochem. J.* 369: 17-22.
6. De Souza, C.T., et al. 2005. Short-term inhibition of peroxisome proliferator-activated receptor- γ coactivator-1 α expression reverses diet-induced diabetes mellitus and hepatic steatosis in mice. *Diabetologia* 48: 1860-1871.