

PPAR γ (E-8): sc-7273

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.

CHROMOSOMAL LOCATION

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

SOURCE

PPAR γ (E-8) is a mouse monoclonal antibody raised against a sequence mapping at the C-terminus of PPAR γ of human origin (identical to corresponding mouse sequence).

PRODUCT

Each vial contains 200 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7273 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-7273 X, 200 μ g/0.1 ml.

Available as agarose conjugate for immunoprecipitation, sc-7273 AC, 500 μ g/0.25 ml agarose in 1 ml.

Available as fluorescein (sc-7273 FITC) or rhodamine (sc-7273 TRITC) conjugates for immunofluorescence, 200 μ g/1 ml.

Available as Alexa Fluor[®] 405 (sc-7273 AF405), Alexa Fluor[®] 488 (sc-7273 AF488) or Alexa Fluor[®] 647 (sc-7273 AF647) conjugates for immunofluorescence; 100 μ g/2 ml.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA.

STORAGE

Store at 4 $^{\circ}$ 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.

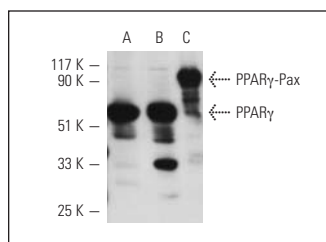
APPLICATIONS

PPAR γ (E-8) is recommended for detection of PPAR γ ₁ and PPAR γ ₂ and, to a lesser extent, PPAR α and PPAR β 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

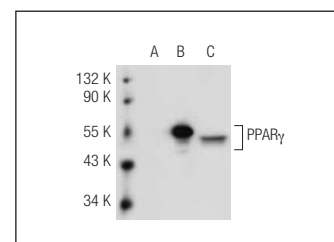
PPAR γ (E-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Positive Controls: THP-1 cell lysate: sc-2238, 3T3-L1 cell lysate: sc-2243 or U-937 cell lysate: sc-2239.

DATA



PPAR γ (E-8): sc-7273. Western blot analysis of PPAR γ expression in U-937 whole cell lysate (A), wildtype human PPAR γ (B) and human PPAR γ -Pax recombinant fusion protein (C). PPAR γ -Pax protein kindly provided by Todd Kroll, Emory University.



PPAR γ (E-8): sc-7273. Western blot analysis of PPAR γ expression in non-transfected 293T: sc-117752 (A), mouse PPAR γ transfected 293T: sc-122729 (B) and U-937 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Huang, J.T., et al. 1999. Interleukin-4-dependent production of PPAR γ ligands in macrophages by 12/15-lipoxygenase. *Nature* 400: 378-382.
- Kroll, T.G., et al. 2000. PAX8-PPAR γ 1 fusion in oncogene human thyroid carcinoma. *Science* 289: 1357-1360.
- Wang, C., et al. 2001. Inhibition of cellular proliferation through I κ B kinase-independent and peroxisome proliferator-activated receptor γ -dependent repression of cyclin D1. *Mol. Cell. Biol.* 21: 3057-3070.
- Nakashiro, K.I., et al. 2001. Role of peroxisome proliferator-activated receptor γ and its ligands in non-neoplastic and neoplastic human urothelial cells. *Am. J. Pathol.* 159: 591-597.
- Fajas, L., et al. 2002. The retinoblastoma-histone deacetylase 3 complex inhibits PPAR γ and adipocyte differentiation. *Dev. Cell* 3: 903-910.
- Fajas, L., et al. 2003. PPAR γ controls cell proliferation and apoptosis in an RB-dependent manner. *Oncogene* 22: 4186-4193.
- Reddy, R.C., et al. 2004. Deactivation of murine alveolar macrophages by peroxisome proliferator-activated receptor- γ ligands. *Am. J. Physiol. Lung Cell Mol. Physiol.* 286: L613-L619.
- Zhang, X., et al. 2004. Peroxisome proliferator-activated receptor- γ and its ligands attenuate biologic functions of human natural killer cells. *Blood* 104: 3276-3284.