

PPAR γ (E-8): sc-7273

BACKGROUND

Peroxisome proliferator-activated receptors (PPARs), members of the nuclear hormone receptor subfamily of transcription factors, form heterodimers with retinoid X receptors (RXRs). These heterodimers regulate transcription of genes involved in Insulin action, adipocyte differentiation, lipid metabolism and inflammation. PPAR γ is implicated in diseases including obesity, diabetes, atherosclerosis and cancer. PPAR γ activators include prostanoids, fatty acids, thiazolidinediones and N-(2-benzoylphenyl) tyrosine analogues. PPAR γ is a key component in adipocyte differentiation and fat-specific gene expression. A Pro12Ala polymorphism of the PPAR γ_2 gene may reduce transactivation activity *in vitro*. This substitution may affect the immune response to ox-LDL and be associated with type 2 diabetes. In addition, the Pro12Ala variant of the PPAR γ_2 gene may be correlated with abdominal obesity in type 2 diabetes.

CHROMOSOMAL LOCATION

Genetic locus: PPARG (human) mapping to 3p25.2; Pparg (mouse) mapping to 6 E3.

SOURCE

PPAR γ (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 480-505 at the C-terminus of PPAR γ of human origin (identical to corresponding mouse sequence).

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-7273 X, 200 μ g/0.1 ml.

PPAR γ (E-8) is available conjugated to agarose (sc-7273 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-7273 PE), fluorescein (sc-7273 FITC), Alexa Fluor[®] 488 (sc-7273 AF488), Alexa Fluor[®] 546 (sc-7273 AF546), Alexa Fluor[®] 594 (sc-7273 AF594) or Alexa Fluor[®] 647 (sc-7273 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-7273 AF680) or Alexa Fluor[®] 790 (sc-7273 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, PPAR γ (E-8) is available conjugated to biotin (sc-7273 B), 200 μ g/ml, for WB, IHC(P) and ELISA; and to either TRITC (sc-7273 TRITC, 200 μ g/ml) or Alexa Fluor[®] 405 (sc-7273 AF405, 200 μ g/ml), for IF, IHC(P) and FCM.

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% stabilizer protein).

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.

PROTOCOLS

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

APPLICATIONS

PPAR γ (E-8) 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), 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).

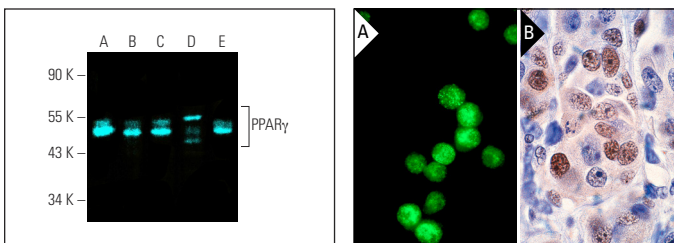
Suitable for use as control antibody for PPAR γ siRNA (h): sc-29455, PPAR γ siRNA (m): sc-29456, PPAR γ siRNA (r): sc-156077, PPAR γ shRNA Plasmid (h): sc-29455-SH, PPAR γ shRNA Plasmid (m): sc-29456-SH, PPAR γ shRNA Plasmid (r): sc-156077-SH, PPAR γ shRNA (h) Lentiviral Particles: sc-29455-V, PPAR γ shRNA (m) Lentiviral Particles: sc-29456-V and PPAR γ shRNA (r) Lentiviral Particles: sc-156077-V.

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

Molecular Weight of PPAR γ isoforms: 54/57 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, U-937 cell lysate: sc-2239 or THP-1 cell lysate: sc-2238.

DATA



PPAR γ (E-8) Alexa Fluor[®] 647: sc-7273 AF647. Direct fluorescent western blot analysis of PPAR γ expression in U-937 (A), HeLa (B), Jurkat (C), NIH/3T3 (D) and THP-1 (E) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214.

PPAR γ (E-8): sc-7273. Immunofluorescence staining of methanol-fixed Jurkat cells showing nuclear localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue at high magnification showing nuclear localization (B).

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.
- Bahrami-Nejad, Z., et al. 2022. Early enforcement of cell identity by a functional component of the terminally differentiated state. *PLoS Biol.* 20: e3001900.
- Uramaru, N., et al. 2023. Rhododendrol, a reductive metabolite of raspberry ketone, suppresses the differentiation of 3T3L1 cells into adipocytes. *Mol. Med. Rep.* 27: 51.

RESEARCH USE

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