SANTA CRUZ BIOTECHNOLOGY, INC.

PPARγ (B-5): sc-271392

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Peroxisome proliferator-activated receptors (PPARs) are members of the nuclear hormone receptor subfamily of transcription factors. PPARs form heterodimers with retinoid X receptors (RXRs). These heterodimers regulate transcription of genes involved in Insulin action, adipocyte differentiation, lipid metabolism and inflammation. PPARγ is implicated in numerous diseases including obesity, diabetes, atherosclerosis and cancer. PPARγ activators include prostanoids, fatty acids, thiazolidinediones and N-(2-benzoylphenyl) tyrosine analogues. A key component in adipocyte differentiation and fat-specific gene expression, PPARγ may modulate macrophage functions such as proinflammatory activities, and stimulate oxidized low-density lipoprotein (x-LDL) uptake. A Pro12Ala polymorphism of the PPARγ_2 gene has been reported to 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 PPARγ_2 gene maybe correlated with abdominal obesity in type 2 diabetes.

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.

CHROMOSOMAL LOCATION

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

SOURCE

PPARγ (B-5) is a mouse monoclonal antibody raised against amino acids 8-106 of PPARγ of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 lambda 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-271392 X, 200 µg/0.1 ml.

PPARγ (B-5) is available conjugated to agarose (sc-271392 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271392 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271392 PE), fluorescein (sc-271392 FITC), Alexa Fluor® 488 (sc-271392 AF488), Alexa Fluor® 546 (sc-271392 AF546), Alexa Fluor® 594 (sc-271392 AF594) or Alexa Fluor® 647 (sc-271392 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271392 AF680) or Alexa Fluor® 790 (sc-271392 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

PPARγ (B-5) is recommended for detection of PPARγ_1 and PPARγ_2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

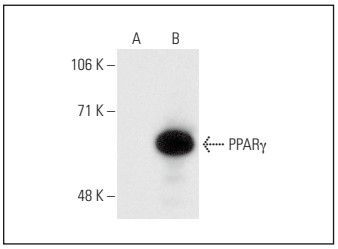
Suitable for use as control antibody for PPARγ siRNA (h): sc-29455, PPARγ siRNA (m): sc-29456, PPARγ siRNA (r): sc-156077, PPARγ shRNA Plasmid (h): sc-29455-SH, PPARγ shRNA Plasmid (m): sc-29456-SH, PPARγ shRNA Plasmid (r): sc-156077-SH, PPARγ shRNA (h) Lentiviral Particles: sc-29455-V, PPARγ shRNA (m)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

PPARγ (B-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

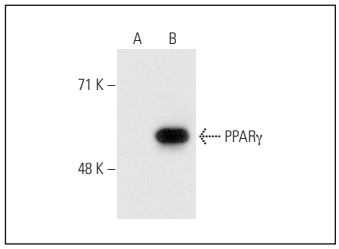
Molecular Weight of PPARγ isoforms: 54/57 kDa.

Positive Controls: PPARγ (h4): 293T Lysate: sc-110516, PPARγ (m): 293T Lysate: sc-122729 or U-937 cell lysate: sc-2239.

DATA



PPARγ (B-5): sc-271392. Western blot analysis of PPARγ expression in non-transfected: sc-117752 (**A**) and mouse PPARγ transfected: sc-122729 (**B**) 293T whole cell lysates.



PPARγ (B-5): sc-271392. Western blot analysis of PPARγ expression in non-transfected: sc-117752 (**A**) and human PPARγ transfected: sc-110516 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lee, T.S., et al. 2009. Resistin increases lipid accumulation by affecting class A scavenger receptor, CD36 and ATP-binding cassette transporter-A1 in macrophages. Life Sci. 84: 97-104.
2. Wang, Y., et al. 2018. *Polygonatum odoratum* polysaccharides modulate gut microbiota and mitigate experimentally induced obesity in rats. Int. J. Mol. Sci. 19: 3587.
3. Chi, X., et al. 2019. Suppression of microRNA-27a protects against liver ischemia/reperfusion injury by targeting PPARγ and inhibiting endoplasmic reticulum stress. Mol. Med. Rep. 20: 4003-4012.
4. Farruggio, S., et al. 2020. Genistein and 17β-estradiol protect hepatocytes from fatty degeneration by mechanisms involving mitochondria, inflammasome and kinases activation. Cell. Physiol. Biochem. 54: 401-416.

RESEARCH USE

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