SANTA CRUZ BIOTECHNOLOGY, INC.

PPARγ$_2$ (E-9): sc-390740

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-den-sity 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.
3. Sterchele, P.F., et al. 1996. Regulation of peroxisome proliferator-activated receptor-α mRNA in rat liver. Arch. Biochem. Biophys. 326: 281-289.

CHROMOSOMAL LOCATION

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

SOURCE

PPARγ$_2$ (E-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-27 of PPARγ$_2$ of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PPARγ$_2$ (E-9) is available conjugated to agarose (sc-390740 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390740 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390740 PE), fluorescein (sc-390740 FITC), Alexa Fluor® 488 (sc-390740 AF488), Alexa Fluor® 546 (sc-390740 AF546), Alexa Fluor® 594 (sc-390740 AF594) or Alexa Fluor® 647 (sc-390740 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390740 AF680) or Alexa Fluor® 790 (sc-390740 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

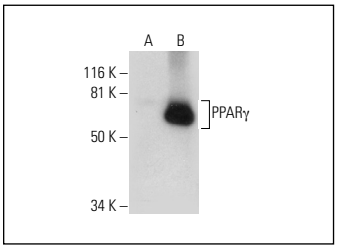
PPARγ$_2$ (E-9) is recommended for detection of PPARγ$_2$ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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 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.

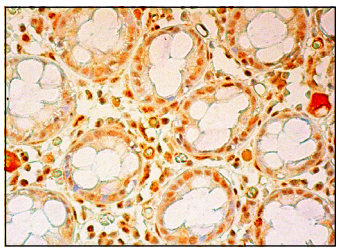
Molecular Weight of PPARγ$_2$: 60 kDa.

Positive Controls: PPARγ (m): 293T Lysate: sc-122729.

DATA



PPARγ$_2$ (E-9): sc-390740. Western blot analysis of PPARγ expression in non-transfected: sc-117752 (**A**) and mouse PPARγ transfected: sc-122729 (**B**) 293T whole cell lysates.



PPARγ$_2$ (E-9): sc-390740. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing nuclear staining of glandular cells and endothelial cells.

SELECT PRODUCT CITATIONS

1. Yang, H.Y., et al. 2015. Angiotensin-(1-7) stimulates cholesterol efflux from Angiotensin II-treated cholesterol-loaded THP-1 macrophages through the suppression of p38 and c-Jun N-terminal kinase signaling. Mol. Med. Rep. 12: 1387-1392.
2. Hallenborg, P., et al. 2021. Adipose MDM2 regulates systemic Insulin sensitivity. Sci. Rep. 11: 21839.
3. Marroncini, G., et al. 2023. Hyponatremia-related liver steatofibrosis and impaired spermatogenesis: evidence from a mouse model of the syndrome of inappropriate antidiuresis. J. Endocrinol. Invest. 46: 967-983.
4. Sánchez, V., et al. 2024. Oral supplementation of phosphatidylcholine attenuates the onset of a diet-induced metabolic dysfunction-associated steatohepatitis in female C57BL/6J mice. Cell. Mol. Gastroenterol. Hepatol. 17: 785-800.

RESEARCH USE

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