SANTA CRUZ BIOTECHNOLOGY, INC.

PPARγ$_2$ (G-18): sc-22020

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.

CHROMOSOMAL LOCATION

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

SOURCE

PPARγ$_2$ (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PPARγ$_2$ of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as agarose conjugate for immunoprecipitation, sc-22020 AC, 500 µg/0.25 ml agarose in 1 ml.

Blocking peptide available for competition studies, sc-22020 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PPARγ$_2$ (G-18) is recommended for detection of PPARγ$_2$ of mouse, rat and to a lesser extent, human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with PPARγ$_1$.

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.

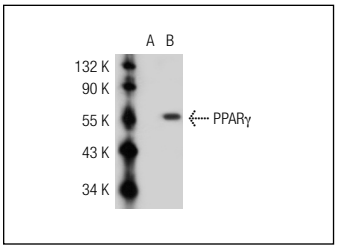
Molecular Weight of PPARγ$_2$: 60 kDa.

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

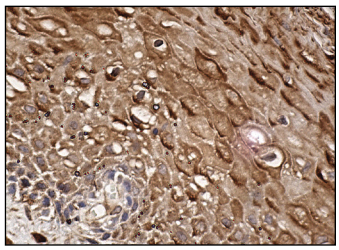
STORAGE

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

DATA



PPARγ$_2$ (G-18): sc-22020. Western blot analysis of PPARγ expression in non-transfected: sc-117752 (**A**) and mouse PPARγ transfected: sc-122729 (**B**) 293T whole cell lysates.



PPARγ$_2$ (G-18): sc-22020. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing nuclear and cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Böhme, M., et al. 2008. Analysis of the transcriptional regulation of the FABP2 promoter haplotypes by PPARγ/RXRα and Oct-1. Biochim. Biophys. Acta 1779: 616-621.
2. Stanton, L.A., et al. 2008. PPARγ$_2$ expression in growth plate chondrocytes is regulated by p38 and GSK-3. J. Cell. Mol. Med. 14: 242-256.
3. Duque, G., et al. 2010. Effects of risedronate on bone marrow adipocytes in postmenopausal women. Osteoporos. Int. 22: 1547-1553.
4. Stanton, L.A., et al. 2010. PPARγ2 expression in growth plate chondrocytes is regulated by p38 and GSK-3. J. Cell. Mol. Med. 14: 242-256.
5. Kim, S.J., et al. 2011. Adipocyte expression of the glucose-dependent Insulinotropic polypeptide receptor involves gene regulation by PPARγ and histone acetylation. J. Lipid Res. 52: 759-770.
6. Araújo-Vilar, D., et al. 2011. Histological and molecular features of lipomatous and non-lipomatous adipose tissue in familial partial lipodystrophy due to LMNA mutations. Clin. Endocrinol. 76: 816-824.
7. Liew, C.W., et al. 2013. Ablation of TRIP-Br2, a regulator of fat lipolysis, thermogenesis and oxidative metabolism, prevents diet-induced obesity and insulin resistance. Nat. Med. 19: 217-226.

RESEARCH USE

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