SANTA CRUZ BIOTECHNOLOGY, INC.

PPARγ_2 (N-19): sc-22022

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.
3. Sterchele, P.F., et al. 1996. Regulation of peroxisome proliferator-activated receptor-α mRNA in rat liver. Arch. Biochem. Biophys. 326: 281-289.
4. Lemberger, T., et al. 1996. Expression of the peroxisome proliferator-activated receptor α gene is stimulated by stress and follows a diurnal rhythm. J. Biol. Chem. 271: 1764-1769.

CHROMOSOMAL LOCATION

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

SOURCE

PPARγ_2 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PPARγ_2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-22022 P, (100 µg 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-22022 X, 200 µg/0.1 ml.

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 (N-19) is recommended for detection of PPARγ_2 of human and, to a lesser extent, mouse and rat 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.

PPARγ_2 (N-19) is also recommended for detection of PPARγ_2 in additional species, including canine.

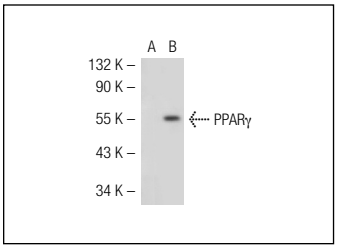
Suitable for use as control antibody for PPARγ siRNA (h): sc-29455, PPARγ siRNA (m): sc-29456, PPARγ shRNA Plasmid (h): sc-29455-SH, PPARγ shRNA Plasmid (m): sc-29456-SH, PPARγ shRNA (h) Lentiviral Particles: sc-29455-V and PPARγ shRNA (m) Lentiviral Particles: sc-29456-V.

PPARγ_2 (N-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

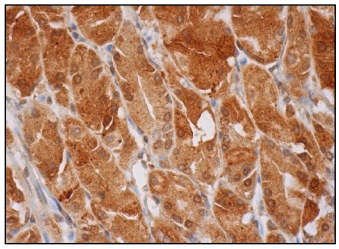
Molecular Weight of PPARγ_2: 60 kDa.

Positive Controls: U-937 cell lysate: sc-2239.

DATA



PPARγ_2 (N-19): sc-22022. 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 (N-19): sc-22022. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing nuclear and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Medici, D., et al. 2010. Conversion of vascular endothelial cells into multipotent stem-like cells. Nat. Med. 16: 1400-1406.

RESEARCH USE

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