SANTA CRUZ BIOTECHNOLOGY, INC.

# PPARγ (N-20): sc-1984

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 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PPARγ 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-1984 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-1984 X, 200 µg/0.1 ml.

## APPLICATIONS

PPARγ (N-20) is recommended for detection of PPARγ$_1$ and PPARγ$_2$ of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PPARγ (N-20) is also recommended for detection of PPARγ$_1$ and PPARγ$_2$ in additional species, including equine, canine, bovine, porcine and avian.

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.

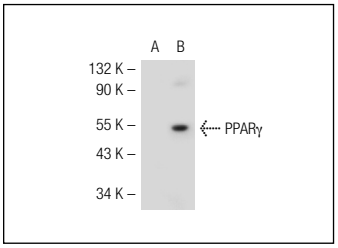
PPARγ (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of PPARγ isoforms: 54/57 kDa.

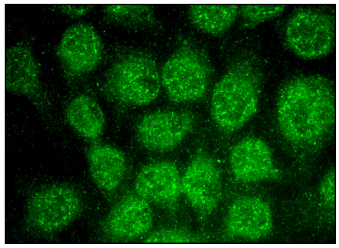
## STORAGE

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

## DATA




PPARγ (N-20): sc-1984. Western blot analysis of PPARγ expression in non-transfected: sc-117752 (**A**) and mouse PPARγ transfected: sc-122729 (**B**) 293T whole cell lysates.



PPARγ (N-20): sc-1984. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

## SELECT PRODUCT CITATIONS


1. Ricote, M., et al. 1998. Expression of the peroxisome proliferator-activated receptor γ (PPARγ) in human atherosclerosis and regulation in macrophage by colony stimulating factors and oxidized low density lipoprotein. Proc. Natl. Acad. Sci. USA 95: 7614-7619.
2. Bogner-Strauss, J.G., et al. 2010. Reconstruction of gene association network reveals a transmembrane protein required for adipogenesis and targeted by PPARγ. Cell. Mol. Life Sci. 67: 4049-4064.
3. Zhao, W., et al. 2011. Peroxisome proliferator-activated receptor γ negatively regulates IFN-β production in Toll-like receptor (TLR) 3- and TLR4-stimulated macrophages by preventing interferon regulatory factor 3 binding to the IFN-β promoter. J. Biol. Chem. 286: 5519-5528.
4. Zhao, H., et al. 2014. Coexpression of IQ-domain GTPase-activating protein 1 (IQGAP1) and Dishevelled (Dvl) is correlated with poor prognosis in non-small cell lung cancer. PLoS ONE 9: e113713.
5. Kim, Y.M., et al. 2015. The anti-obesity effects of a tuna peptide on 3T3-L1 adipocytes are mediated by the inhibition of the expression of lipogenic and adipogenic genes and by the activation of the Wnt/β-catenin signaling pathway. Int. J. Mol. Med. 36: 327-334.
6. Watanabe, M., et al. 2015. The E3 ubiquitin ligase TRIM23 regulates adipocyte differentiation via stabilization of the adipogenic activator PPARγ. Elife 4: e05615.


## RESEARCH USE

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