

## PPAR $\gamma$ (K-18): sc-6284

### 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. PPAR $\gamma$  is implicated in numerous diseases including obesity, diabetes, atherosclerosis and cancer. PPAR $\gamma$  activators include prostanoids, fatty acids, thiazolidinediones and N-(2-benzoylphenyl) tyrosine analogues. A key component in adipocyte differentiation and fat-specific gene expression, PPAR $\gamma$  may modulate macrophage functions such as proinflammatory activities, and stimulate oxidized low-density lipoprotein (x-LDL) uptake. A Pro12Ala polymorphism of the PPAR $\gamma_2$  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 PPAR $\gamma_2$  gene may be 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

PPAR $\gamma$  (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PPAR $\gamma$  of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6284 P, (100  $\mu$ g 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-6284 X, 200  $\mu$ g/0.1 ml.

### APPLICATIONS

PPAR $\gamma$  (K-18) is recommended for detection of PPAR $\gamma_1$  and PPAR $\gamma_2$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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). PPAR $\gamma$  (K-18) is also recommended for detection of PPAR $\gamma_1$  and PPAR $\gamma_2$  in additional species, including equine, canine, bovine, porcine and avian.

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

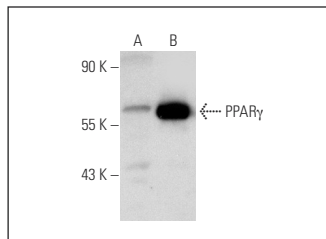
PPAR $\gamma$  (K-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of PPAR $\gamma$  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



PPAR $\gamma$  (K-18): sc-6284. Western blot analysis of PPAR $\gamma$  expression in non-transfected: sc-117752 (A) and mouse PPAR $\gamma$  transfected: sc-122729 (B) 293T whole cell lysates.

### SELECT PRODUCT CITATIONS

1. Lee, T.W., et al. 2003. Differential expression of inducible nitric oxide synthase and peroxisome proliferator-activated receptor gamma in non-small cell lung carcinoma. *Eur. J. Cancer* 39: 1296-1301.
2. Chan, U.P., et al. 2003. Induction of colon cancer cell death by 7-hydroxystaurosporine (UCN-01) is associated with increased p38 MAPK and decreased Bcl-x<sub>L</sub>. *Anticancer Drugs* 14: 761-766.
3. Kim, H.J., et al. 2006. Identification of a truncated alternative splicing variant of human PPAR $\gamma_1$  that exhibits dominant negative activity. *Biochem. Biophys. Res. Commun.* 347: 698-706.
4. David, V., et al. 2007. Mechanical loading down-regulates peroxisome proliferator-activated receptor  $\gamma$  in bone marrow stromal cells and favors osteoblastogenesis at the expense of adipogenesis. *Endocrinology* 148: 2553-2562.
5. Marfella, R., et al. 2009. Myocardial lipid accumulation in patients with pressure-overloaded heart and metabolic syndrome. *J. Lipid Res.* 50: 2314-2323.
6. Barbieri, M., et al. 2012. Effects of PPARs agonists on cardiac metabolism in littermate and cardiomyocyte-specific PPAR- $\gamma$ -knockout (CM-PGKO) mice. *PLoS ONE* 7: e35999.

### RESEARCH USE

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

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Try **PPAR $\gamma$  (E-8): sc-7273** or **PPAR $\gamma$  (B-5): sc-271392**, our highly recommended monoclonal alternatives to PPAR $\gamma$  (K-18). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **PPAR $\gamma$  (E-8): sc-7273**.