SANTA CRUZ BIOTECHNOLOGY, INC.

PPARα (N-19): sc-1985

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Peroxisome proliferator-activated receptors (PPARs) are nuclear hormone receptors that can be activated by a variety of compounds including fibratus, thiazolidinediones, prostaglandins and fatty acids. Three PPAR subtypes, designated PPARα, PPARβ and PPARγ, have been described. PPARs promote transcription by forming heterodimers with members of the retinoid X receptor (RXR) family of steroid receptors and binding to specific DNA motifs termed PPAR-response elements (PPREs). PPARα is abundant in primary hepatocytes where it regulates the expression of proteins involved in fatty acid metabolism. PPARβ is the most widely distributed subtype and is often expressed at high levels. PPARγ is predominantly seen in adipose tissue where it plays a critical role in regulating adipocyte differentiation. Interestingly, both the orphan nuclear hormone receptor LXRα and thyroid receptor (TR) have been shown to act as antagonists of PPARα/RXRα binding to PPREs.

CHROMOSOMAL LOCATION

Genetic locus: PPARA (human) mapping to 22q13.31; Ppara (mouse) mapping to 15 E2.

SOURCE

PPARα (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PPARα 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-1985 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-1985 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PPARα (N-19) is recommended for detection of PPARα 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).

PPARα (N-19) is also recommended for detection of PPARα in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PPARα siRNA (h): sc-36307, PPARα siRNA (m): sc-36308, PPARα shRNA Plasmid (h): sc-36307-SH, PPARα shRNA Plasmid (m): sc-36308-SH, PPARα shRNA (h) Lentiviral Particles: sc-36307-V and PPARα shRNA (m) Lentiviral Particles: sc-36308-V.

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

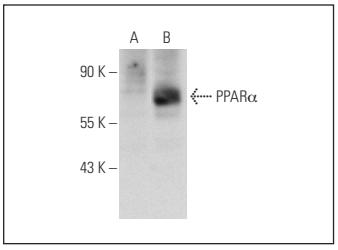
Molecular Weight of PPARα: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or PPARα (h2): 293T Lysate: sc-129532.

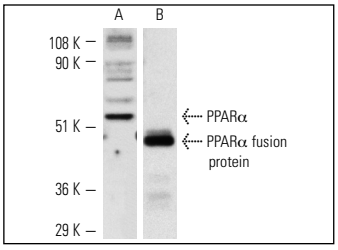
STORAGE

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

DATA



PPARα (N-19): sc-1985. Western blot analysis of PPARα expression in non-transfected: sc-117752 (**A**) and human PPARα transfected: sc-129532 (**B**) 293T whole cell lysates.



Western blot analysis of PPARα expression in Hep G2 whole cell lysate (**A**) and human recombinant PPARα fusion protein (**B**). Antibodies tested include: PPARα (H-98): sc-9000 (**A**) and PPARα (N-19): sc-1985 (**B**).

SELECT PRODUCT CITATIONS

1. Bishop-Bailey, D., et al. 1999. Endothelial cell apoptosis induced by the peroxisome proliferator-activated receptor (PPAR) ligand 15-deoxy-δ12, 14-prostaglandin J2. J. Biol. Chem. 274: 17042-17048.
2. Kuhla, A., et al. 2011. Aging is associated with a shift of fatty metabolism toward lipogenesis. J. Gerontol. A Biol. Sci. Med. Sci. 66: 1192-1200.
3. Iwamoto, F., et al. 2011. Nuclear transport of peroxisome-proliferator activated receptor α. J. Biochem. 149: 311-319.
4. Miranda, S., et al. 2012. Beneficial effects of fenofibrate in retinal pigment epithelium by the modulation of stress and survival signaling under diabetic conditions. J. Cell. Physiol. 227: 2352-2362.
5. Liu, I.M., et al. 2012. Regulation of obesity and lipid disorders by extracts from *Angelica acutiloba* root in high-fat diet-induced obese rats. Phytother. Res. 26: 223-230.
6. Chang, C.J., et al. 2012. Myricetin increases hepatic peroxisome proliferator-activated receptor α protein expression and decreases plasma lipids and adiposity in rats. Evid. Based Complement. Alternat. Med. 2012: 787152.
7. Tzeng, T.F., et al. 2012. Vinegar-baked radix bupleuri regulates lipid disorders via a pathway dependent on peroxisome-proliferator-activated receptor-α in high-fat-diet-induced obese rats. Evid. Based Complement. Alternat. Med. 2012: 827278.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **PPARα (H-2): sc-398394** or **PPARα (467D1a): sc-130640**, our highly recommended monoclonal alternatives to PPARα (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PPARα (H-2): sc-398394**.