SANTA CRUZ BIOTECHNOLOGY, INC.

PPARα (C-20): sc-1982

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 (also designated PPARδ) 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. 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 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-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-1982 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-1982 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PPARα (C-20) is recommended for detection of PPARα of mouse, rat and human origin by 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); weakly cross-reactive with PPARβ and PPARγ.

PPARα (C-20) is also recommended for detection of PPARα in additional species, including equine, canine, bovine, porcine and avian.

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 (C-20) 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.

STORAGE

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

SELECT PRODUCT CITATIONS

1. Linseman, D.A., et al. 2001. Liporegulation in diet-induced obesity. The antisteatotic role of hyperleptinemia. J. Biol. Chem. 276: 5629-5759.
2. Tordjman, K., et al. 2001. PPARα deficiency reduces Insulin resistance and atherosclerosis in apoE-null mice. J. Clin. Invest. 107: 1025-1034.
3. Wang, B., et al. 2001. Lipopolysaccharide results in a marked decrease in hepatocyte nuclear factor 4 α in rat liver. Hepatology 34: 979-989.
4. Cammas, L., et al. 2006. Developmental regulation of prostacyclin synthase and prostacyclin receptors in the ovine uterus and conceptus during the peri-implantation period. Reproduction 131: 917-927.
5. Rodriguez-Calvo, R., et al. 2007. Peroxisome proliferator-activated receptor α down-regulation is associated with enhanced ceramide levels in age-associated cardiac hypertrophy. J. Gerontol. A Biol. Sci. Med. Sci. 62: 1326-1336.
6. Wierzbicki, M., et al. 2009. Chronic, *in vivo,* PPARα activation prevents lipid overload in rat liver induced by high fat feeding. Adv. Med. Sci. 54: 59-65.
7. Putti, R., et al. 2009. Leptin effects on testis and epididymis in the lizard *Podarcis sicula,* during summer regression. Gen. Comp. Endocrinol. 160: 168-175.
8. Velkov, T., et al. 2010. Ligand-enhanced expression and in-cell assay of human peroxisome proliferator-activated receptor α ligand binding domain. Protein Expr. Purif. 70: 260-269.
9. Wei, Z., et al. 2012. Maternal exposure to di-(2-ethylhexyl)phthalate alters kidney development through the renin-angiotensin system in offspring. Toxicol. Lett. 212: 212-221.
10. Pratheesh, M.D., et al. 2014. Molecular characterization and xenogenic application of Wharton's jelly derived caprine mesenchymal stem cells. Vet. Res. Commun. 38: 139-148.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.