SANTA CRUZ BIOTECHNOLOGY, INC.

PPARα (H-2): sc-398394

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 (H-2) is a mouse monoclonal antibody raised against amino acids 1-98 of PPARα of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain 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-398394 X, 200 µg/0.1 ml.

PPARα (H-2) is available conjugated to agarose (sc-398394 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398394 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398394 PE), fluorescein (sc-398394 FITC), Alexa Fluor® 488 (sc-398394 AF488), Alexa Fluor® 546 (sc-398394 AF546), Alexa Fluor® 594 (sc-398394 AF594) or Alexa Fluor® 647 (sc-398394 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398394 AF680) or Alexa Fluor® 790 (sc-398394 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PPARα (H-2) is recommended for detection of PPARα of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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 (H-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

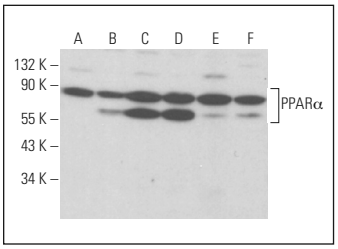
Molecular Weight of PPARα: 55 kDa.

Positive Controls: PPARα (h2): 293T Lysate: sc-129532, Hep G2 cell lysate: sc-2227 or HUV-EC-C whole cell lysate: sc-364180.

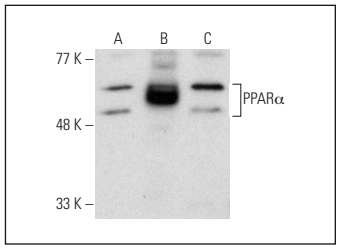
STORAGE

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

DATA



PPARα (H-2): sc-398394. Western blot analysis of PPARα expression in A-10 (**A**), U-87 MG (**B**), Hep G2 (**C**), NCI-H292 (**D**), HEL 92.1.7 (**E**) and AN3 CA (**F**) whole cell lysates.



PPARα (H-2) HRP: sc-398394 HRP. Direct western blot analysis of PPARα expression in non-transfected 293T: sc-117752 (**A**), human PPARα transfected 293T: sc-129532 (**B**) and HUV-EC-C (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Bellet, M.M., et al. 2016. Histone deacetylase SIRT1 controls proliferation, circadian rhythm, and lipid metabolism during liver regeneration in mice. J. Biol. Chem. 291: 23318-23329.
2. Cheng, Y., et al. 2017. Alleviation of toxicity caused by overactivation of PPARα through PPARα-inducible miR-181a2. Mol. Ther. Nucleic Acids 9: 195-206.
3. Olona, A., et al. 2018. Epoxygenase inactivation exacerbates diet and aging-associated metabolic dysfunction resulting from impaired adipogenesis. Mol. Metab. 11: 18-32.
4. Zhang, L., et al. 2018. The protective activities of dietary sea cucumber cerebrosides against atherosclerosis through regulating inflammation and cholesterol metabolism in male mice. Mol. Nutr. Food Res. 62: e1800315.
5. Huang, L., et al. 2018. Inhibition of protein arginine methyltransferase 5 enhances hepatic mitochondrial biogenesis. J. Biol. Chem. 293: 10884-10894.
6. Chandra, S., et al. 2018. Aspirin induces lysosomal biogenesis and attenuates amyloid plaque pathology in a mouse model of Alzheimer's disease via PPARα. J. Neurosci. 38: 6682-6699.
7. Nagappan, A., et al. 2018. Gomisin N alleviates ethanol-induced liver injury through ameliorating lipid metabolism and oxidative stress. Int. J. Mol. Sci. 19: 2601.
8. Khaleel, E.F. and Abdel-Aleem, G.A. 2019. Obestatin protects and reverses nonalcoholic fatty liver disease and its associated Insulin resistance in rats via inhibition of food intake, enhancing hepatic adiponectin signaling, and blocking ghrelin acylation. Arch. Physiol. Biochem. 125: 64-78.

RESEARCH USE

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