

PPAR α (467D1a): sc-130640

BACKGROUND

Peroxisome proliferator-activated receptors (PPARs) are nuclear hormone receptors that can be activated by a variety of compounds including fibrates, thiazolidinediones, prostaglandins and fatty acids. Three PPAR subtypes, designated PPAR α , PPAR β (also designated PPAR δ) and PPAR γ , 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). PPAR α is abundant in primary hepatocytes where it regulates the expression of proteins involved in fatty acid metabolism. PPAR β is the most widely distributed subtype and is often expressed at high levels. Interestingly, both the orphan nuclear hormone receptor LXR α and thyroid receptor (TR) have been shown to act as antagonists of PPAR α /RXR α binding to PPREs.

REFERENCES

1. Brun, R.P., et al. 1996. Differential activation of adipogenesis by multiple PPAR isoforms. *Genes Dev.* 10: 974-984.
2. Sterchele, P.F., et al. 1996. Regulation of peroxisome proliferator-activated receptor- α mRNA in rat liver. *Arch. Biochem. Biophys.* 326: 281-289.

CHROMOSOMAL LOCATION

Genetic locus: PPARG (human) mapping to 22q13.31.

SOURCE

PPAR α (467D1a) is a mouse monoclonal antibody raised against a recombinant protein corresponding an internal region of PPAR α of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

PPAR α (467D1a) is recommended for detection of PPAR α of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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

Molecular Weight of PPAR α : 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

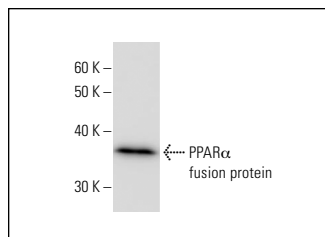
STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

DATA



PPAR α (467D1a): sc-130640. Western blot analysis of human recombinant PPAR α fusion protein.

SELECT PRODUCT CITATIONS

1. Hu, W., et al. 2012. MicroRNA-141 represses HBV replication by targeting PPARA. *PLoS ONE* 7: e34165.
2. Li, P., et al. 2015. Modulation of fatty acid metabolism is involved in the alleviation of isoproterenol-induced rat heart failure by fenofibrate. *Mol. Med. Rep.* 12: 7899-7906.
3. Li, B., et al. 2017. TGF- β 2-induced ANGPTL4 expression promotes tumor progression and osteoclast differentiation in giant cell tumor of bone. *Oncotarget* 8: 54966-54977.
4. Ju, J., et al. 2018. Correlation between PPAR α methylation level in peripheral blood and atherosclerosis of NAFLD patients with DM. *Exp. Ther. Med.* 15: 2727-2730.
5. Guo, W.W., et al. 2018. Flavonones from *Penthorum chinense* ameliorate hepatic steatosis by activating the SIRT1/AMPK pathway in Hep G2 cells. *Int. J. Mol. Sci.* 19: 2555.
6. Zhang, W., et al. 2019. SIRT1 mediates the role of RNA-binding protein QKI 5 in the synthesis of triglycerides in non-alcoholic fatty liver disease mice via the PPAR α /FoxO1 signaling pathway. *Int. J. Mol. Med.* 43: 1271-1280.
7. Wang, Z., et al. 2020. HIF-1 α -upregulated lncRNA-H19 regulates lipid droplet metabolism through the AMPK α pathway in hepatic stellate cells. *Life Sci.* 255: 117818.
8. Huang, Y., et al. 2020. IRF1-mediated downregulation of PGC1 α contributes to cardiorenal syndrome type 4. *Nat. Commun.* 11: 4664.
9. Xia, S., et al. 2021. Dihydroartemisinin regulates lipid droplet metabolism in hepatic stellate cells by inhibiting lncRNA-H19-induced AMPK signal. *Biochem. Pharmacol.* 192: 114730.



See **PPAR α (H-2): sc-398394** for PPAR α antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.