SANTA CRUZ BIOTECHNOLOGY, INC.

PPARβ (F-7): sc-74440

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. 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: PPARD (human) mapping to 6p21.31.

SOURCE

PPARβ (F-7) is a mouse monoclonal antibody raised against amino acids 2-75 of PPARβ of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PPARβ (F-7) is recommended for detection of PPARβ of 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), immunohistochemistry (including paraffin-embedded sections) (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 PPARβ siRNA (h): sc-36305, PPARβ shRNA Plasmid (h): sc-36305-SH and PPARβ shRNA (h) Lentiviral Particles: sc-36305-V.

Molecular Weight of PPARβ: 52 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Jurkat nuclear extract: sc-2132 or JAR cell lysate: sc-2276.

STORAGE

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

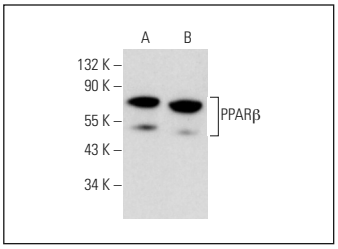
PROTOCOLS

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

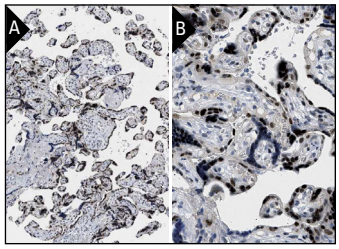
RESEARCH USE

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

DATA



PPARβ (F-7): sc-74440. Western blot analysis of PPARβ expression in Jurkat (**A**) and JAR (**B**) whole cell lysates.



PPARβ (F-7): sc-74440. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear staining of trophoblastic cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Nakamura, Y., et al. 2012. Functional role of PPARδ in corneal epithelial wound healing. Am. J. Pathol. 180: 583-598.
2. Liu, G., et al. 2013. PPARδ agonist GW501516 inhibits PDGF-stimulated pulmonary arterial smooth muscle cell function related to pathological vascular remodeling. Biomed Res. Int. 2013: 903947.
3. Buchberger, E., et al. 2013. Overexpression of the transcriptional repressor complex Bcl-6/BCoR leads to nuclear aggregates distinct from classical aggresomes. PLoS ONE 8: e76845.
4. Morales, M., et al. 2014. RARRES3 suppresses breast cancer lung metastasis by regulating adhesion and differentiation. EMBO Mol. Med. 6: 865-881.
5. Ho, W.T., et al. 2014. Dexamethasone modifies mitomycin C-triggered interleukin-8 secretion in isolated human Tenon's capsule fibroblasts. Exp. Eye Res. 124: 86-92.
6. Paton, C.M., et al. 2017. Dihydrosterculic acid from cottonseed oil suppresses desaturase activity and improves liver metabolomic profiles of high-fat-fed mice. Nutr. Res. 45: 52-62.
7. Martín-Martín, N., et al. 2018. PPARδ elicits ligand-independent repression of trefoil factor family to limit prostate cancer growth. Cancer Res. 78: 399-409.
8. Yang, J., et al. 2021. MicroRNA-185 inhibits the proliferation and migration of HaCaT keratinocytes by targeting peroxisome proliferator-activated receptor β. Exp. Ther. Med. 21: 366.

CONJUGATES

See **PPARβ (F-10): sc-74517** for PPARβ antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.