SANTA CRUZ BIOTECHNOLOGY, INC.

PPARβ (K-20): sc-1987

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; Ppard (mouse) mapping to 17 A3.3.

SOURCE

PPARβ (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PPARβ of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1987 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-1987 X, 200 µg/0.1 ml.

APPLICATIONS

PPARβ (K-20) is recommended for detection of PPARβ (also designated PPARδ) 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), 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 siRNA (m): sc-36306, PPARβ shRNA Plasmid (h): sc-36305-SH, PPARβ shRNA Plasmid (m): sc-36306-SH, PPARβ shRNA (h) Lentiviral Particles: sc-36305-V and PPARβ shRNA (m) Lentiviral Particles: sc-36306-V.

PPARβ (K-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

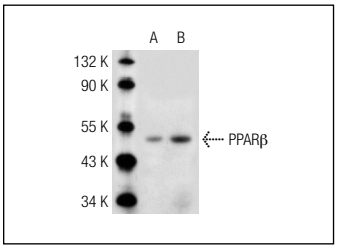
Molecular Weight of PPARβ: 52 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, RAW 264.7 nuclear extract: sc-24961 or Sol8 nuclear extract: sc-2157.

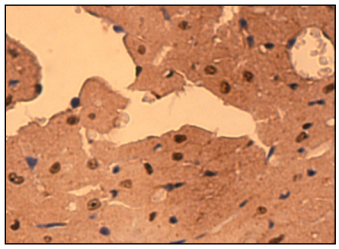
STORAGE

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

DATA



PPARβ (K-20): sc-1987. Western blot analysis of PPARβ expression in Sol8 (**A**) and RAW 264.7 (**B**) nuclear extracts.



PPARβ (K-20): sc-1987. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse heart tissue showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Korabiowska, M., et al. 2002. Differential expression of DNA nonhomologous end-joining proteins Ku70 and Ku80 in melanoma progression. Mod. Pathol. 15: 426-433.
2. Girroir, E.E., et al. 2008. Quantitative expression patterns of peroxisome proliferator-activated receptor-β/δ (PPARβ/δ) protein in mice. Biochem. Biophys. Res. Commun. 371: 456-461.
3. Sheng, L., et al. 2008. Peroxisome proliferator-activated receptor β/δ activation improves angiotensin II-induced cardiac hypertrophy *in vitro*. Clin. Exp. Hypertens. 30: 109-119.
4. Marsillach, J., et al. 2009. Paraoxonase-1 is related to inflammation, fibrosis and PPAR δ in experimental liver disease. BMC Gastroenterol. 9: 3.
5. Salvi, N., et al. 2010. Upregulation of PPARβ/δ is associated with structural and functional changes in the type I diabetes rat diaphragm. PLoS ONE 5: e11494.
6. Foreman, J.E., et al. 2010. Ligand activation of peroxisome proliferator-activated receptor-β/δ (PPARβ/δ) inhibits cell growth in a mouse mammary gland cancer cell line. Cancer Lett. 288: 219-225.
7. Nakamura, Y., et al. 2012. Functional role of PPARδ in corneal epithelial wound healing. Am. J. Pathol. 180: 583-598.

RESEARCH USE

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