

PPAR β (K-20): sc-1987

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. PPAR γ is predominantly seen in adipose tissue where it plays a critical role in regulating adipocyte differentiation. 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. Mansen, A., et al. 1996. Expression of the peroxisome proliferator-activated receptor (PPAR) in the mouse colonic mucosa. *Biochem. Biophys. Res. Comm.* 222: 844-851.
3. Lemberger, T., et al. 1996. Expression of the peroxisome proliferator-activated receptor α gene is stimulated by stress and follows a diurnal rhythm. *J. Biol. Chem.* 271: 1764-1769.

CHROMOSOMAL LOCATION

Genetic locus: PPAR δ (human) mapping to 6p21.1; Ppard (mouse) mapping to 17 A3.3.

SOURCE

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

PRODUCT

Each vial contains 200 μ g 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 μ g 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 μ g/0.1 ml.

STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

PPAR β (K-20) is recommended for detection of PPAR β (also designated PPAR δ) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

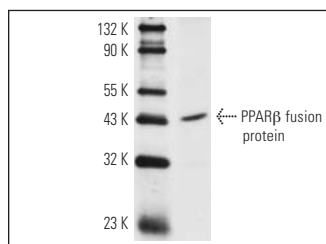
Suitable for use as control antibody for PPAR β siRNA (h): sc-36305 and PPAR β siRNA (m): sc-36306; and as shRNA Plasmid control antibody for PPAR β shRNA Plasmid (h): sc-36305-SH and PPAR β shRNA Plasmid (m): sc-36306-SH.

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

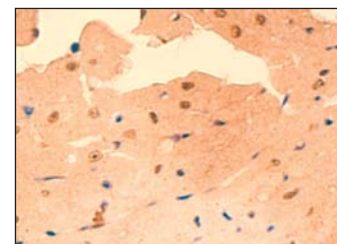
Molecular Weight of PPAR β : 52 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132 or Sol8 nuclear extract: sc-2157.

DATA



PPAR β (K-20): sc-1987. Western blot analysis of human recombinant PPAR β fusion protein.



PPAR β (K-20): sc-1987. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse heart tissue showing nuclear 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. Solanes, G., et al. 2003. Functional relationship between MyoD and PPAR-dependent regulatory pathways in the control of the human uncoupling protein-3 gene transcription. *Mol. Endocrinol.* 17: 1944-1958.
3. Korabiowska, M., et al. 2004. Application of new *in situ* hybridization probes for Ku70 and Ku80 in tissue microarrays of paraffin-embedded malignant melanomas: correlation with immunohistochemical analysis. *Hum. Pathol.* 35: 210-216 .
4. Korabiowska, M., et al. 2004. Quantitative analysis of Ku70 and Ku80 mRNA gene expression in melanoma brain metastases. Correlation with immunohistochemistry and *in situ* hybridization. *Cancer Genomics Proteomics* 1: 225-230.
5. Pirbhai, M., et al. 2006. The secreted protease factor CPAF is responsible for degrading pro-apoptotic BH3-only proteins in *Chlamydia trachomatis*-infected cells. *J. Biol. Chem.* 281: 31495-31501.