SANTA CRUZ BIOTECHNOLOGY, INC.

PPARγ (D1H8H4): sc-81152

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Peroxisome proliferator-activated receptors (PPARs) are members of the nuclear hormone receptor subfamily of transcription factors. PPARs form heterodimers with retinoid X receptors (RXRs). These heterodimers regulate transcription of genes involved in Insulin action, adipocyte differentiation, lipid metabolism and inflammation. PPARγ is implicated in numerous diseases including obesity, diabetes, atherosclerosis and cancer. PPARγ activators include prostanoids, fatty acids, thiazolidinediones and N-(2-benzoylphenyl) tyrosine analogues. A key component in adipocyte differentiation and fat-specific gene expression, PPARγ may modulate macrophage functions such as proinflammatory activities, and stimulate oxidized low-density lipoprotein (x-LDL) uptake. A Pro12Alα polymorphism of the $PPAR\gamma_2$ gene has been reported to reduce transactivation activity *in vitro*. This substitution may affect the immune response to ox-LDL and be associated with type 2 diabetes. In addition, the Pro12Alα variant of the $PPAR\gamma_2$ gene maybe correlated with abdominal obesity in type 2 diabetes.

CHROMOSOMAL LOCATION

Genetic locus: PPARG (human) mapping to 3p25.2; Pparg (mouse) mapping to 6 E3.

SOURCE

PPARγ (8D1H8H4) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 77-272 of PPARγ of human origin.

PRODUCT

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

APPLICATIONS

PPARγ (8D1H8H4) is recommended for detection of PPARγ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for PPARγ siRNA (h): sc-29455, PPARγ siRNA (m): sc-29456, PPARγ siRNA (r): sc-156077, PPARγ shRNA Plasmid (h): sc-29455-SH, PPARγ shRNA Plasmid (m): sc-29456-SH, PPARγ shRNA Plasmid (r): sc-156077-SH, PPARγ shRNA (h) Lentiviral Particles: sc-29455-V, PPARγ shRNA (m) Lentiviral Particles: sc-29456-V and PPARγ shRNA (r) Lentiviral Particles: sc-156077-V.

Molecular Weight of PPARγ isoforms: 54/57 kDa.

Positive Controls: THP-1 cell lysate: sc-2238 or U-937 cell lysate: sc-2239.

STORAGE

Store at 4° 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.

SELECT PRODUCT CITATIONS

1. Pati, F., et al. 2014. Printing three-dimensional tissue analogues with decellularized extracellular matrix bioink. Nat. Commun. 5: 3935.
2. Cho, S.J., et al. 2015. Peroxisome proliferator-activated receptor γ upregulates galectin-9 and predicts prognosis in intestinal-type gastric cancer. International journal of cancer. Int. J. Cancer 136: 810-820.
3. Pati, F., et al. 2015. Biomimetic 3D tissue printing for soft tissue regeneration. Biomaterials 62: 164-175.
4. Konieczna, A., et al. 2015. Thiazolidinediones regulate the level of ABC transporters expression on lung cancer cells. Klin. Onkol. 28: 431-438.
5. Hernández-Bule, M.L., et al. 2016. Antiadipogenic effects of subthermal electric stimulation at 448 kHz on differentiating human mesenchymal stem cells. Mol. Med. Rep. 13: 3895-3903.
6. Li, B., et al. 2017. TGF-β2-induced ANGPTL4 expression promotes tumor progression and osteoclast differentiation in giant cell tumor of bone. Oncotarget 8: 54966-54977.
7. Xi, J., et al. 2018. Epigallocatechin-3-gallate protects against secondary osteoporosis in a mouse model via the Wnt/β-catenin signaling pathway. Mol. Med. Rep. 18: 4555-4562.
8. Wang, Z., et al. 2020. The protective effects of the β3 adrenergic receptor agonist BRL37344 against liver steatosis and inflammation in a rat model of high-fat diet-induced nonalcoholic fatty liver disease (NAFLD). Mol. Med. 26: 54.
9. Liang, K., et al. 2020. Contrary roles of Wnt/β-catenin signaling in BMP9-induced osteogenic and adipogenic differentiation of 3T3-L1 preadipocytes. Cell Biochem. Biophys. 78: 347-356.
10. Li, N., et al. 2020. Immunoregulation of microglial polarization: an unrecognized physiological function of α-synuclein. J. Neuroinflammation 17: 272.
11. Seidu, T., et al. 2021. DHT causes liver steatosis via transcriptional regulation of SCAP in normal weight female mice. J. Endocrinol. 250: 49-65.

PROTOCOLS

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