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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
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PRODUCT INFORMATION

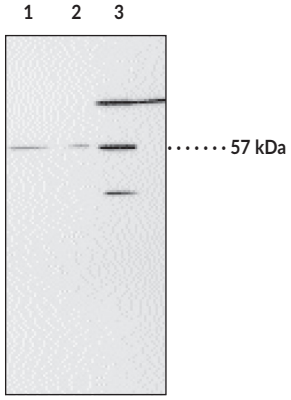
PPARα Polyclonal Antibody

Item No. 101710

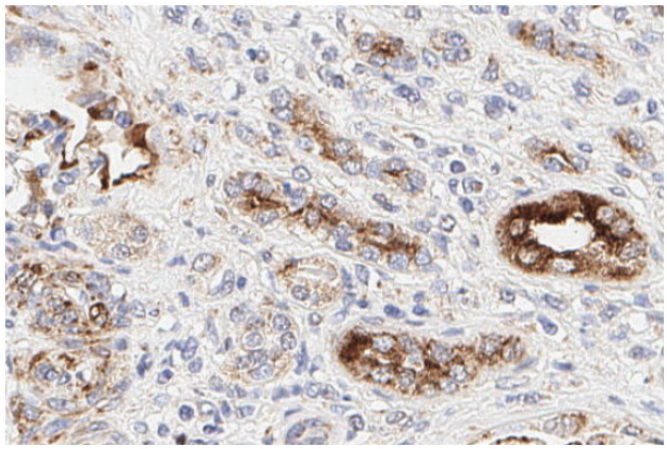
Overview and Properties

Contents:	This vial contains 500 µl of peptide affinity-purified polyclonal antibody.
Synonyms:	NR1C, Peroxisome Proliferator-activated Receptor α
Immunogen:	Synthetic peptide form the N-terminal region of human PPARα
Cross Reactivity:	(-) PPARγ
Species Reactivity:	(+) Human, mouse, porcine, and baboon; other species not tested
Uniprot No.:	Q07869
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host:	Rabbit
Application:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution for IHC is 1:80 and 1:200 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: Baboon myometrium (100 µg)
Lane 2: Baboon myometrium (50 µg)
Lane 3: K-562 cell lysate (75 µg)



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human kidney tissue after heat-induced antigen retrieval in pH 6.0 citrate buffer. After incubation with PPARα Polyclonal Antibody (Item No. 101710), at a 1:80 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromomgen (DAB).

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PRODUCT INFORMATION

Description

Peroxisome proliferator-activated receptor α (PPARα) is a member of the nuclear receptor family of ligand-activated transcription factors that regulates a variety of metabolic functions and inflammation.[1] It contains an N-terminal domain that is subject to phosphorylation, a DNA-binding domain, and a C-terminal ligand-binding domain (Item No. 10009088).[2] PPARα is highly expressed in tissues with high fatty acid oxidation rates, including the liver, heart, skeletal muscle, brown adipose tissue, and kidney, as well as in macrophages and T cells.[2,3] It is activated by a variety of endogenous ligands such as fatty acids, eicosanoids, and endocannabinoids, as well as synthetic agents, including fenofibrate (Item No. 10005368) and gemfibrozil (Item No. 14835).[4] Upon activation, PPARα heterodimerizes with the retinoid X receptor (RXR) and binds to PPAR response elements in PPARα target genes, recruiting RNA polymerase II and initiating gene transcription.[1] PPARα transcriptionally regulates a variety of genes involved in several cellular processes, including lipid and hormone transport, peroxisomal and mitochondrial β-oxidation, amino acid metabolism, and inflammation.[1,2] Genome-wide deletion of *Ppara* protects mice from high-fat diet-induced hyperinsulinemia and insulin resistance.[5] *PPARA* SNPs have been found in individuals with a variety of cardiovascular conditions, including hypertension, atherosclerosis, coronary artery disease, left ventricular hypertrophy, or myocardial infarction.[1] Formulations containing PPARα agonists have been used in the treatment of hyperlipidemia. Cayman's PPARα Polyclonal Antibody can be used for immunohistochemistry (IHC) and Western blot (WB) applications. The antibody recognizes the N-terminal region of PPARα at approximately 52 kDa from human, baboon, mouse, and pig samples.

References

1. Li, S., Yang, B., Du, Y., *et al*. Targeting PPARα for the treatment and understanding of cardiovascular diseases. *Cell Physiol. Biochem*. **51(6)**, 2760-2775 (2018).
2. Pawlak, M., Lefebvre, P., and Staels, B. Molecular mechanism of PPARa action and its impact on lipid metabolism, inflammation and fibrosis in non-alcoholic fatty liver disease. *J. Hepatol*. **62**, 720-733 (2015).
3. Rakhshandehroo, M., Knoch, B., Müller, M., *et al*. Peroxisome proliferator-activated receptor alpha target genes. *PPAR Res*. 612089 (2010).
4. Ruscica, M., Busnelli, M., Runfola, E., *et al*. Impact of PPAR-Alpha polymorphisms-the case of metabolic disorders and atherosclerosis. *Int. J. Mol. Sci*. **20(18)**, 4378 (2019).
5. Guerre-Millo, M., Rouault, C., Poulain, P., *et al*. PPAR-α-null mice are protected from high-fat diet-induced insulin resistance. *Diabetes* **50(12)**, 2809-2814 (2001).

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