

Datasheet for 600-401-418**PPAR gamma 2 Antibody****Overview**

Description:	Anti-PPAR gamma 2 (N-terminal specific) (RABBIT) Antibody - 600-401-418
Item No.:	600-401-418
Size:	100 µg
Applications:	ELISA, WB, IHC
Reactivity:	Mouse
Host Species:	Rabbit

Product Details

Background:	Since their discovery in the early 1990's, the peroxisome proliferator activated receptors (PPARs) have attracted significant attention. This is primarily because PPARs serve as receptors for two very important classes of drugs: the hypolipidemic fibrates and the insulin sensitizing thiazolidinediones. Peroxisome proliferators are non-genotoxic carcinogens that are purported to exert their effect on cells through their interaction with members of the nuclear hormone receptor family termed PPARs. Nuclear hormone receptors are ligand-dependent intracellular proteins that stimulate transcription of specific genes by binding to specific DNA sequences following activation by the appropriate ligand. Upon binding fatty acids or hypolipidemic drugs, PPARs form heterodimers with retinoid X receptors (RXRs) and these heterodimers regulate the expression of target genes. There are 3 known subtypes of PPARs: PPAR-alpha, PPAR-delta and PPAR-gamma. Mostly target genes are involved in the catabolism of fatty acids. Conversely, PPAR-gamma is activated by peroxisome proliferators such as prostaglandins, leukotrienes and anti-diabetic thiazolidinediones and affects the expression of genes involved in the storage of the fatty acids. PPAR-gamma may also be involved in adipocyte differentiation. It has also been shown that PPARs can induce transcription of acyl coenzyme A oxidase and cytochrome P450 through interaction with specific response elements.
Synonyms:	rabbit anti-PPAR gamma 2 antibody, Peroxisome proliferator-activated receptor gamma, Nuclear receptor subfamily 1 group C member 3, NR1C3, PPARG, PPAR gamma, PPARG2 antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	PPARG
Reactivity:	Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a region near the amino terminus of human PPAR gamma 2.
Purity/Specificity:	This affinity purified antibody is directed against human PPAR gamma isoform 2 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest reactivity with this protein from human and macaque based on 100% homology for the immunogen sequence. Cross reactivity with PPARG2 protein from dog and swine is likely due to 94% homology (15/16 identities) with the protein from these sources. Cross reactivity does occur with PPARG2 from mouse. Mouse PPARG2 shows 87% homology to the immunogen. Cross reactivity with PPARG2 homologues from other sources has not been determined. No reactivity is expected against other subtypes of PPAR.
Relevant Links:	• UniProtKB - P37231 • NCBI - 20336229 • GenelD - 5468

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	IHC (Based on references)
Application Note:	This affinity purified antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a single band approximately 55 kDa in size corresponding to PPARG2 by western blot in the appropriate tissue or cell lysate.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:4,000 - 1:40,000
WB:	1:1,000 - 1:3,000

Formulation

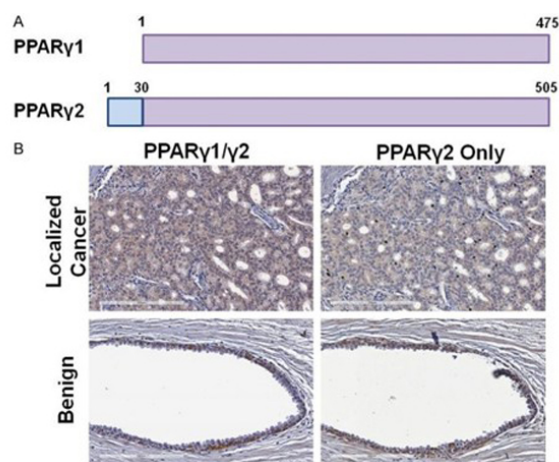
Physical State:	Liquid (sterile filtered)
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Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

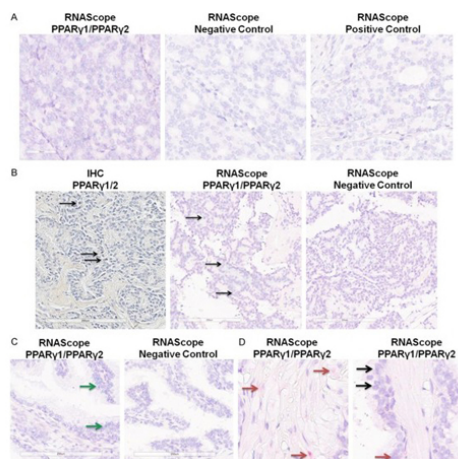
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Immunohistochemistry

PPAR γ isoform expression in benign and cancerous human prostate tissue. A. There are two isoforms of PPAR γ , with PPAR γ 2 having an additional 30 amino acids at the amino terminus. B. Examples of immunohistochemistry (IHC) using an antibody that detects both PPAR γ 1/2 as well as an antibody specific for PPAR γ 2 in normal and cancerous human prostate tissue. Fig 1. PMID: 31317050



Immunohistochemistry

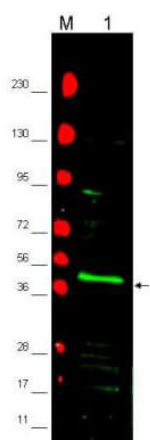
Detection of PPAR γ 1 and γ 2 RNAs in human prostate tissue. RNAs specific to PPAR γ 1 (green) or PPAR γ 2 (red) were detected using the RNAScope duplex staining platform.

A. Example of staining in a PC section, demonstrating PPAR γ 1 staining (green) expression but no PPAR γ 2 staining (left), along with negative and positive control staining on adjacent sections.

B. Example of staining in a metastatic PC sample. (Left) IHC staining with the antibody that detects both PPAR γ 1/2 isoforms. (Center) RNAScope staining for PPAR γ 1 and PPAR γ 2 showing only PPAR γ 1 staining. (Right) RNAScope negative control staining. Arrows show positive nuclei.

C. Example of RNAScope staining for PPAR γ 1 and PPAR γ 2 showing only PPAR γ 1 staining in a benign gland (left) with negative control (right). Green arrows show PPAR γ 1 staining.

D. Examples of RNAScope staining for PPAR γ 1 and PPAR γ 2 showing PPAR γ 2 staining in stroma (left) and PPAR γ 1 and PPAR γ 2 in benign epithelial cells (right). Red arrows show PPAR γ 2, black arrows show areas of both PPAR γ 1 staining (green) and PPAR γ 2 staining (red). Fig 2. PMID: 31317050



Western Blot

Western blot using Rockland's affinity purified anti-PPAR γ 2 antibody shows detection of PPAR gamma 2 protein in a mouse 3T3 whole cell lysate (p/n W10-000-358).

Approximately 20 μ g of lysate was loaded onto a 4-20% gradient gel followed by transfer to nitrocellulose. Primary antibody was used at a 1:2,000 dilution in 5% BLOTTO PBS solution (p/n B501-0500). The membrane was washed and reacted with a 1:10,000 dilution of IRDyeTM800 Conjugated Affinity Purified Goat-anti-Rabbit IgG [H&L] MX10.

Molecular weight estimation was made by comparison to prestained MW markers indicated at the left (lane M). Other detection systems will yield similar results.

References

- Salgia MM et al. Different roles of peroxisome proliferator-activated receptor gamma isoforms in prostate cancer. *Am J Clin Exp Urol.* (2019)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.