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### Certificate of Analysis

**Product:** Affinity Purified Anti-PPAR gamma 1 + 2 (internal) (Rabbit)

**Code:** 600-401-419

**Lot #:** 12370

**Size:** 100 µg

**Physical State:** Liquid (sterile filtered)

**Antibody 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

**Stabilizer:** None

**Preservative:** 0.01% (w/v) Sodium Azide

**Storage Conditions:** Store vial at -20° C prior to opening. Dilute only prior to immediate use. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Expiration date is one (1) year from date of opening.

**Background Information:** 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.

**Application Note(s):** This affinity-purified antibody has been tested for use in ELISA. Specific conditions for reactivity should be optimized by the end user.

|                               |                             |                    |
|-------------------------------|-----------------------------|--------------------|
| <b>Recommended Dilutions:</b> | <b>ELISA</b>                | 1:8,000 - 1:32,000 |
|                               | <b>WESTERN BLOT</b>         | User Optimized     |
|                               | <b>IMMUNOHISTOCHEMISTRY</b> | User Optimized     |
|                               | <b>OTHER APPLICATIONS</b>   | User Optimized     |

**Purity and Specificity:** This affinity purified antibody is directed against human PPAR gamma protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest broad reactivity with this protein from several sources. Expect reactivity against human (γ1 and γ2), mouse (γ1 and γ2), rat, squirrel, orangutan, duck (γ1), macaque (γ1-γ7), boar (γ1a-1d), mink, guinea pig, rabbit (γ1 and γ3), dog and hamster sources based on 100% homology for the immunogen sequence. Cross reactivity with PPAR gamma homologues from other sources has not been determined. No reactivity is expected against other subtypes of PPAR.

**Relevant Link(s):** Swiss Prot: [P37231](#) (isoform 2)

NCBI Link [NP\\_619726](#) (isoform 1)

**Protein Sequence:** Human PPAR gamma isoform 1, 475 aa, predicted MW 54.4 kDa [NP\\_619726](#)

|     |            |                   |                   |            |            |            |
|-----|------------|-------------------|-------------------|------------|------------|------------|
| 1   | mvdtempfw  | tngissvdl         | svmedhshsf        | dikpftvdf  | ssistphyed | ipftrtdpvv |
| 61  | adykydlklq | eyqsaikev         | asppyysekt        | qlynkpheep | snslmaiecr | vcgdkasgfh |
| 121 | ygvhacegck | gffrrtirik        | lydrdclnc         | rihkksrnkc | qycrfqkcla | vgmshnaif  |
| 181 | grmpqaek   | l laeissdid       | qlnpesadlr        | alakhlydsy | iksfpitkak | arailtght  |
| 241 | dkspfyidm  | nslm <b>gedki</b> | <b>kfkhitplqe</b> | qskevairif | qgcqfrsvea | vqeyeyaks  |
| 301 | ipgfvnldn  | dqvtllkygv        | heiytmlas         | lmnkdgvlis | egqgfmref  | lkslrkpgfd |
| 361 | fmepkfev   | kfnaleldds        | dlaifavii         | lsgdrpglln | vkpiediqdn | llqalelqk  |
| 421 | lnhpessqlf | akllqkmtld        | rqivtehvql        | lqvikktted | mslhpllqei | ykdly      |

**Protein Sequence:** Human PPAR gamma isoform 2, 505 aa, predicted MW 57.6 kDa [NP\\_056953](#)

|     |            |            |            |            |                   |                   |
|-----|------------|------------|------------|------------|-------------------|-------------------|
| 1   | mgetlgdspi | dpesdsftdt | lsanisqemt | mvdtempfw  | tngissvdl         | svmedhshsf        |
| 61  | dikpftvdf  | ssistphyed | ipftrtdpvv | adykydlklq | eyqsaikev         | asppyysekt        |
| 121 | qlynkpheep | snslmaiecr | vcgdkasgfh | ygvhacegck | gffrrtirik        | lydrdclnc         |
| 181 | rihkksrnkc | qycrfqkcla | vgmshnaif  | grmpqaek   | l laeissdid       | qlnpesadlr        |
| 241 | alakhlydsy | iksfpitkak | arailtght  | dkspfyidm  | nslm <b>gedki</b> | <b>kfkhitplqe</b> |
| 301 | qskevairif | qgcqfrsvea | vqeyeyaks  | ipgfvnldn  | dqvtllkygv        | heiytmlas         |
| 361 | lmnkdgvlis | egqgfmref  | lkslrkpgfd | fmepkfev   | kfnaleldds        | dlaifavii         |
| 421 | lsgdrpglln | vkpiediqdn | llqalelqk  | lnhpessqlf | akllqkmtld        | rqivtehvql        |
| 481 | lqvikktted | mslhpllqei | ykdly      |            |                   |                   |

**Immunogen:** This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 255 -268 of human PPAR gamma isoform 1.

#### General Reference(s):

Mukherjee, R. et al. (1994) Human and rat peroxisome proliferator activated receptors (PPARs) demonstrate similar tissue distribution but different responsiveness to PPAR activators. *J. Steroid Biochem. Mol. Biol.* **51** (3-4), 157-166.

Plutzky, J. (2003) PPARs as therapeutic targets: reverse cardiology? *Science* **302**(5644):406-7.

Lee, C.H. et al. (2003) Transcriptional repression of atherogenic inflammation: modulation by PPAR delta. *Science* **302** (5644):453-7.

Chinetti, G. et al. (2000) Peroxisome proliferator-activated receptors (PPARs): nuclear receptors at the crossroads between lipid metabolism and inflammation. *Inflamm Res.* **49**(10):497-505.

Lazar MA. (2001) Progress in cardiovascular biology: PPAR for the course. *Nat Med.* **1**:23-4.

#### Related Products:

|              |   |   |
|--------------|---|---|
| #600-401-418 | Affinity Purified Anti-PPAR gamma 2 (RABBIT)                                |   |
| #600-401-419 | Affinity Purified Anti-PPAR gamma 1 and 2 (RABBIT)                          |   |
| #600-401-420 | Affinity Purified Anti-PPAR delta (RABBIT)                                  |   |
| #600-401-421 | Affinity Purified Anti-PPAR alpha (RABBIT)                                  |   |
| #611-703-127 | Peroxidase Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (DONKEY) MX10 |   |
| #611-132-122 | IRDye800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10     |   |
| #B501-0500   | 500 g   | BLOTTO  |
| #BSA-30      | 500 ml  | 30% BOVINE SERUM ALBUMIN SOL'N in 0.85% sodium chloride (no preservative or stabilizer) |
| #B304        | 10 ml   | NORMAL GOAT SERUM (NGS)   |
| #KIA-003     | <b>MaxTag™</b> Anti-RABBIT IgG Kit for Immunoblotting                       |   |
| #MB-070      | Blocking Buffer for Fluorescent Western Blotting                            |   |

**USDA Certification:** 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.

**Note:** 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.