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Anti-DGAT1 Picoband Antibody

Catalog # ABO12487

Specification

Anti-DGAT1 Picoband Antibody - Product Information

Application	**WB**
Primary Accession	O75907
Host	**Rabbit**
Reactivity	**Human, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Diacylglycerol O-acyltransferase 1(DGAT1) detection. Tested with WB in Human;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-DGAT1 Picoband Antibody - Additional Information

Gene ID 8694

Other Names
Diacylglycerol O-acyltransferase 1, 2.3.1.20, ACAT-related gene product 1, Acyl-CoA retinol O-fatty-acyltransferase, ARAT, Retinol O-fatty-acyltransferase, 2.3.1.76, Diglyceride acyltransferase, DGAT1, AGRP1, DGAT

Calculated MW
55278 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Rat

Subcellular Localization
Endoplasmic reticulum membrane ; Multi-pass membrane protein .

Protein Name
Diacylglycerol O-acyltransferase 1

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence in the middle region of human DGAT1 (280-318aa RRILEMLFFTQLQVGLIQQWMVPTIQNSMKPFKDMDYSR), different from the related mouse and rat sequences by one amino acid.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins.

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-DGAT1 Picoband Antibody - Protein Information

Name DGAT1 {ECO:0000303|PubMed:16214399, ECO:0000312|HGNC:HGNC:2843}

Function
Catalyzes the terminal and only committed step in triacylglycerol synthesis by using diacylglycerol and fatty acyl CoA as substrates (PubMed:16214399, PubMed:18768481, PubMed:28420705, PubMed:32433610, PubMed:32433611, PubMed:9756920). Highly expressed in epithelial cells of the small intestine and its activity is essential for the absorption of dietary fats (PubMed:18768481). In liver, plays a role in esterifying exogenous fatty acids to glycerol, and is required to synthesize fat for storage (PubMed:16214399). Also present in female mammary glands, where it produces fat in the milk (By similarity). May be involved in VLDL (very low density lipoprotein) assembly (PubMed:18768481). In contrast to DGAT2 it is not essential for survival (By similarity). Functions as the major acyl-CoA retinol acyltransferase (ARAT) in the skin, where it acts to maintain retinoid homeostasis and prevent retinoid toxicity leading to skin and hair disorders (PubMed:16214399). Exhibits additional acyltransferase activities, includin acyl CoA:monoacylglycerol acyltransferase (MGAT), wax monoester and wax diester synthases (By similarity). Also able to use 1-monoalkylglycerol (1-MAkG) as an acyl acceptor for the synthesis of monoalkyl-monoacylglycerol (MAMAG) (PubMed:28420705).

Cellular Location
Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q9Z2A7}; Multi-pass membrane protein

Anti-DGAT1 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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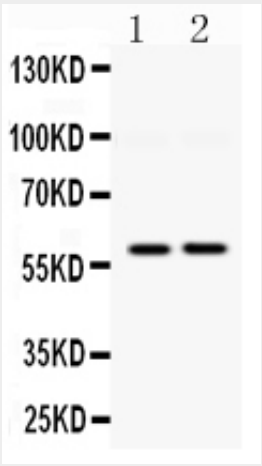
Anti-DGAT1 Picoband Antibody - Images



Anti- DGAT1 Picoband antibody, ABO12487, Western blottingAll lanes: Anti DGAT1 (ABO12487) at 0.5ug/mlLane 1: Rat Kidney Tissue Lysate at 50ugLane 2: HELA Whole Cell Lysate at 40ugPredicted bind size: 60KDObserved bind size: 60KD

Anti-DGAT1 Picoband Antibody - Background

Acyl-CoA: diacylglycerol acyltransferase (DGAT) is a microsomal enzyme that plays a central role in the metabolism of cellular diacylglycerol lipids and catalyzes the terminal and only committed step in triacylglycerol synthesis by using diacylglycerol (DAG) and fatty acyl CoA as substrates. DGAT had been considered necessary for adipose tissue formation and essential for survival. There are two isozymes of DGAT encoded by the genes DGAT1 and DGAT2. DGAT1 is a host factor for HCV infection that binds core protein, localizes it to DGAT1-generated lipid droplets, and recruits viral RNA replication complexes for viral assembly. DGAT2-generated lipid droplets formed normally in cells treated with the DGAT1 inhibitor, suggesting that DGAT1 inhibitors may be useful as antiviral therapeutics.