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KD-Validated Anti-Diacylglycerol O-acyltransferase 1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1503

Specification

KD-Validated Anti-Diacylglycerol O-acyltransferase 1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	O75907
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 55 kDa , observed, 48 kDa KDa**
Gene Name	**DGAT1**
Aliases	**DGAT1; Diacylglycerol O-Acyltransferase 1; ARGP1; DGAT; Acyl-CoA Retinol O-Fatty-Acyltransferase; Diglyceride Acyltransferase; EC 2.3.1.20; ARAT; Acyl Coenzyme A:Cholesterol Acyltransferase Related Gene 1; Diacylglycerol O-Acyltransferase (Mouse) Homolog; Acyl-CoA:Diacylglycerol Acyltransferase; Retinol O-Fatty-Acyltransferase; ACAT Related Gene Product 1; ACAT-Related Gene Product 1; EC 2.3.1.76; EC 2.3.1; DIAR7; AGRP1**
Immunogen	**A synthesized peptide derived from human DGAT1**

KD-Validated Anti-Diacylglycerol O-acyltransferase 1 Rabbit Monoclonal 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 {ECO:0000303|PubMed:16214399, ECO:0000312|HGNC:HGNC:2843}

KD-Validated Anti-Diacylglycerol O-acyltransferase 1 Rabbit Monoclonal 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:<a href="http://www.uniprot.org/citations/28420705"

target="_blank">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).

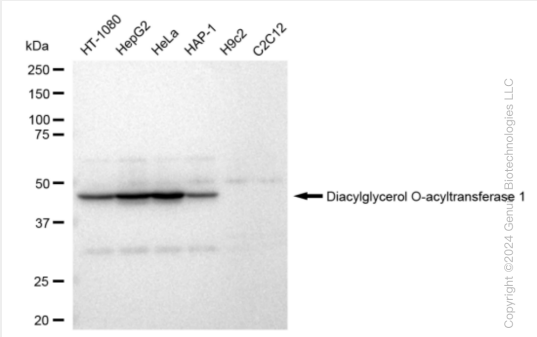
Cellular Location
Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q9Z2A7}; Multi-pass membrane protein

KD-Validated Anti-Diacylglycerol O-acyltransferase 1 Rabbit Monoclonal 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

KD-Validated Anti-Diacylglycerol O-acyltransferase 1 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-Diacylglycerol O-acyltransferase 1 antibody (Cat#AGI1503). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot

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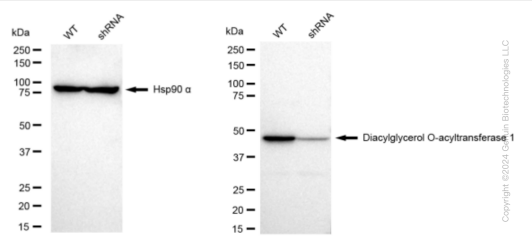
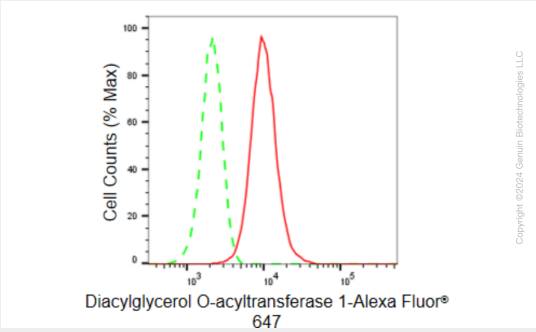
was incubated with anti-Diacylglycerol O-acyltransferase 1 antibody (Cat#AGI1503, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-Diacylglycerol O-acyltransferase 1 antibody (Cat#AGI1503). Diacylglycerol O-acyltransferase 1 expression in wild type (WT) and Diacylglycerol O-acyltransferase 1 shRNA knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-Diacylglycerol O-acyltransferase 1 antibody (Cat#AGI1503, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Diacylglycerol O-acyltransferase 1 expression in HeLa cells using Diacylglycerol O-acyltransferase 1 antibody (Cat#AGI1503, 1:2,000). Green, isotype control; red, Diacylglycerol O-acyltransferase 1.