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Goat Anti-DGAT1 Antibody

Peptide-affinity purified goat antibody
Catalog # AF1315a

Specification

Goat Anti-DGAT1 Antibody - Product Information

Application	**WB, E**
Primary Accession	O75907
Other Accession	NP_036211, 8694, 13350 (mouse), 84497 (rat)
Reactivity	**Human, Rat**
Predicted	**Mouse, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**55278**

Goat Anti-DGAT1 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

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-DGAT1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-DGAT1 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

Goat Anti-DGAT1 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

Goat Anti-DGAT1 Antibody - Images

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AF1315a (0.3 µg/ml) staining of Rat Duodenum lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-DGAT1 Antibody - Background

The enzyme encoded by this gene utilizes diacylglycerol and fatty acyl CoA as substrates in order to catalyze the final stage of triacylglycerol synthesis. It is also involved in cellular as well as physiological metabolic processes.

Goat Anti-DGAT1 Antibody - References

DGAT1 participates in the effect of HNF4A on hepatic secretion of triglyceride-rich lipoproteins. Krapivner S, et al. Arterioscler Thromb Vasc Biol, 2010 May. PMID 20167659.
Visceral and subcutaneous adipose tissue diacylglycerol acyltransferase activity in humans. Hou XG, et al. Obesity (Silver Spring), 2009 Jun. PMID 19197254.
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Thematic review series: glycerolipids. DGAT enzymes and triacylglycerol biosynthesis. Yen CL, et al. J Lipid Res, 2008 Nov. PMID 18757836.
AGPAT6 is a novel microsomal glycerol-3-phosphate acyltransferase. Chen YQ, et al. J Biol Chem, 2008 Apr 11. PMID 18238778.