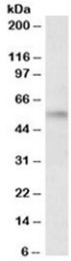
DGAT1 Antibody / Diacylglycerol O-acyltransferase 1 (R35384)

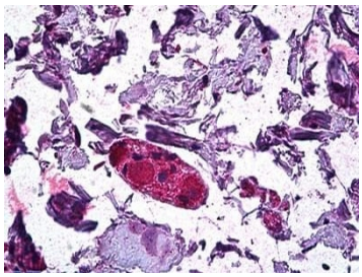
Catalog No.	Formulation	Size
R35384-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Rat
Predicted Reactivity	Mouse, Dog
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	8694
Localization	Cytoplasmic
Applications	Western blot: 0.3-1.0ug/ml IHC (FFPE): 3-6ug/ml ELISA (peptide) LOD: 1:64000
Limitations	This DGAT1 antibody is available for research use only.



DGAT1 Antibody Rat Duodenum WB. Western blot analysis of DGAT1 expression was performed using anti-DGAT1 antibody in rat duodenum lysate. DGAT1, also known as Diacylglycerol O-Acyltransferase 1, catalyzes the final step of triglyceride synthesis and is highly expressed in intestinal tissues involved in dietary lipid absorption. A specific immunoreactive band is detected at approximately 45-55 kDa, consistent with the predicted molecular weight of DGAT1 (~55 kDa). Prominent expression in the duodenum is in agreement with the established role of DGAT1 in re-esterification of dietary fatty acids and chylomicron assembly. These results support the utility of DGAT1 Antibody for studies of lipid metabolism, intestinal fat absorption, and energy homeostasis.



DGAT1 Antibody Human Colon IHC. IHC staining of FFPE human colon tissue with DGAT1 antibody demonstrated strong cytoplasmic staining in glandular epithelial cells, consistent with the role of DGAT1 (Diacylglycerol O-Acyltransferase 1) in triglyceride synthesis and intestinal lipid metabolism. DGAT1 is highly expressed in enterocytes, where it catalyzes the final step of triglyceride biosynthesis and facilitates dietary fat absorption. The prominent epithelial staining observed in the colon is in agreement with the established involvement of DGAT1 in neutral lipid storage and energy homeostasis. Staining was performed using an alkaline phosphatase detection system. Heat-induced epitope retrieval was achieved by steaming tissue sections in pH 6 citrate buffer before immunostaining with DGAT1 antibody at 3.75 ug/ml.

Description

DGAT1 Antibody recognizes diacylglycerol O-acyltransferase 1 (DGAT1), a membrane-associated enzyme that catalyzes the final and committed step in triglyceride synthesis. DGAT1 transfers fatty acyl groups from acyl-CoA to diacylglycerol, producing triacylglycerols that are stored in lipid droplets and serve as a major source of metabolic energy. As a member of the membrane-bound O-acyltransferase family, DGAT1 is widely expressed in tissues involved in nutrient absorption and lipid metabolism, including the intestine, liver, adipose tissue, mammary gland, and skin.

DGAT1 plays a critical role in maintaining lipid homeostasis by channeling excess fatty acids into neutral lipid storage, thereby protecting cells from lipotoxicity and oxidative stress. In addition to energy storage, DGAT1 contributes to dietary fat absorption, milk fat production, and skin barrier function. Lipid droplets generated through DGAT1 activity are increasingly recognized as dynamic organelles involved in cellular signaling, membrane biosynthesis, and metabolic adaptation.

Altered DGAT1 expression and activity have been associated with obesity, insulin resistance, nonalcoholic fatty liver disease, dyslipidemia, and other metabolic disorders. DGAT1-mediated lipid droplet formation also influences inflammatory signaling and may support tumor cell survival under conditions of metabolic stress. Consequently, DGAT1 has emerged as a therapeutic target in obesity, diabetes, fatty liver disease, and cancer metabolism research.

DGAT1 Antibody is useful for studying triglyceride biosynthesis, lipid droplet formation, energy homeostasis, and fatty acid metabolism. It is commonly used in investigations of obesity, hepatic steatosis, metabolic disease, and cellular responses to nutrient excess and metabolic stress.

Explore our DGAT1 Antibody / Triglyceride Synthesis Enzyme Antibody for additional information on this key regulator of triglyceride synthesis, lipid droplet formation, and metabolic homeostasis.

Application Notes

Optimal dilution of the DGAT1 antibody should be determined by the researcher.

Immunogen

Amino acids QNSMKPFKDMDYS were used as the immunogen for this DGAT1 antibody.

Storage

Aliquot and store the DGAT1 antibody at -20oC.

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