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DGAT1 Rabbit pAb

Catalog # AP98967

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	O75907
Other Accession	O75907
Reactivity	Rat, Human, Mouse
Predicted	Pig, Monkey, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55278
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DGAT1
Epitope Specificity	251-350/488
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the membrane-bound acyltransferase family. Sterol o-acyltransferase subfamily.
SUBUNIT	Homodimer or homotetramer.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Glucose and insulin are anabolic signals which upregulate the transcriptions of a series of lipogenic enzymes to convert excess carbohydrate into triglycerides for efficient energy storage. DGAT1 is a microsomal enzyme that assists in the synthesis of fatty acids into triglycerides. DGAT catalyzes the terminal and only committed step in triacylglycerol synthesis by using diacylglycerol (DAG) and fatty acyl CoA as substrates. DGAT plays a fundamental role in the metabolism of cellular diacylglycerol and is important in higher eukaryotes for physiologic processes involving triacylglycerol metabolism such as intestinal fat absorption, lipoprotein assembly, adipose tissue formation, and lactation. DGAT1 is involved in fat absorption in the intestine and in basal level triglyceride synthesis in adipose tissue, where it is more highly expressed.

Additional Information

Gene ID	8694
Other Names	ARAT; ARGP1; DGAT; DIAR7; D15Ertd23e; DGAT1_HUMAN; DGAT1; ACAT-related gene product 1; Acyl-CoA retinol O-fatty-acyltransferase (ARAT | Retinol O-fatty-acyltransferase); Diglyceride acyltransferase; 2.3.1.20; AGRP1; DGAT1_MOUSE; DGAT1_RAT; diacylglycerol O-acyltransferase 1; diacylglycerol O-acyltransferase (mouse) homolog
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.