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DGAT2 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55035

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q96PD7
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	43831
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DGAT2
Epitope Specificity	251-360/388
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Endoplasmic reticulum membrane.
SIMILARITY	Belongs to the diacylglycerol acyltransferase family.
SUBUNIT	Forms multimeric complexes consisting of several DGAT2 subunits (By similarity).
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. Acyl-coenzyme A:diacylglycerol acyltransferase, also known as DGAT1 and ARGP1, is a microsomal enzyme that assists in the synthesis of fatty acids into triglycerides. DGAT1 catalyzes the terminal and only committed step in triacylglycerol synthesis by using diacylglycerol (DAG) and fatty acyl CoA as substrates. DGAT1 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 form-ation and lactation. DGAT2, which has no homology to DGAT1, differs from DGAT1 in that its activity has been shown to be inhibited by MgCl in an in vitro assay. DGAT2 is expressed primarily in liver and white adipose tissue, which suggests that it plays an important role in mammalian triglyceride metabolism.

Additional Information

Gene ID	84649
Other Names	Diacylglycerol O-acyltransferase 2, 2.3.1.20, Acyl-CoA retinol O-fatty-acyltransferase, ARAT, Retinol O-fatty-acyltransferase, 2.3.1.76, Diglyceride acyltransferase 2, DGAT2 (HGNC:16940)

Target/Specificity	Predominantly expressed in liver and white adipose tissue. Expressed at lower level in mammary gland, testis and peripheral blood leukocytes. Expressed in sebaceous glands of normal skin but decreased psoriatic skin.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-300
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
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	DGAT2 (HGNC:16940)
Function	Essential acyltransferase that catalyzes the terminal and only committed step in triacylglycerol synthesis by using diacylglycerol and fatty acyl CoA as substrates. Required for synthesis and storage of intracellular triglycerides (PubMed:27184406). Probably plays a central role in cytosolic lipid accumulation. In liver, is primarily responsible for incorporating endogenously synthesized fatty acids into triglycerides (By similarity). Also functions as an acyl-CoA retinol acyltransferase (ARAT) (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; Multi-pass membrane protein. Lipid droplet. Cytoplasm, perinuclear region
Tissue Location	Predominantly expressed in liver and white adipose tissue. Expressed at lower level in mammary gland, testis and peripheral blood leukocytes. Expressed in sebaceous glands of normal skin but decreased psoriatic skin.