10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ABHD5 Rabbit pAb

ABHD5 Rabbit pAb
Catalog # AP58263

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8WTS1
Reactivity	Rat
Predicted	Human, Mouse, Dog, Rabbit, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	39096
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ADHD5
Epitope Specificity	281-349/349
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	Cytoplasm. Lipid droplet.
SIMILARITY	Belongs to the peptidase S33 family. ABHD4/ABHD5 subfamily.
SUBUNIT	Interacts with ADRP, PLIN and PNPLA2 (By similarity).
DISEASE	Defects in ABHD5 are the cause of Chanarin-Dorfman syndrome (CDS) [MIM:275630]; also called triglyceride storage disease with impaired long-chain fatty acid oxidation or neutral lipid storage disease with ichthyosis. CDS is an autosomal recessive inborn error of lipid metabolism with multisystemic accumulation of triglycerides although plasma concentrations are normal. Clinical characteristics are congenital generalized ichthyosis, vacuolated leukocytes, hepatomegaly, myopathy, cataracts, neurosensory hearing loss and developmental delay. The disorder presents at birth with generalized, fine, white scaling of the skin and a variable degree of erythema resembling non-bullous congenital ichthyosiform erythroderma.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Abhd5 belongs to a large family of proteins defined by an alpha/beta hydrolase fold, and contains three sequence motifs that correspond to a catalytic triad found in the esterase/lipase/thioesterase subfamily. It differs from other members of this subfamily in that its putative catalytic triad contains an asparagine instead of the serine residue. Mutations in this gene have been associated with Chanarin-Dorfman syndrome, a triglyceride storage disease with impaired long-chain fatty acid oxidation. Widely expressed in various tissues, including skin, lymphocytes, liver, skeletal muscle and brain.

Additional Information

Gene ID	51099

Other Names	1-acylglycerol-3-phosphate O-acyltransferase ABHD5, 2.3.1.51, Abhydrolase domain-containing protein 5, Lipid droplet-binding protein CGI-58, ABHD5 (HGNC:21396), NCIE2
Target/Specificity	Widely expressed in various tissues, including lymphocytes, liver, skeletal muscle and brain. Expressed by upper epidermal layers and dermal fibroblasts in skin, hepatocytes and neurons.
Dilution	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

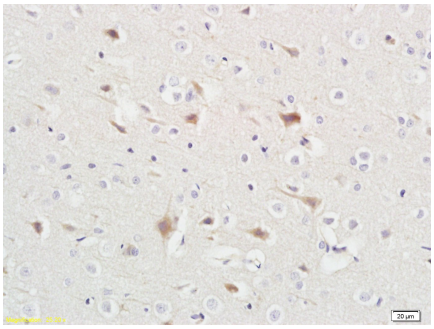
Name	ABHD5 (HGNC:21396)
Synonyms	NCIE2
Function	Coenzyme A-dependent lysophosphatidic acid acyltransferase that catalyzes the transfer of an acyl group on a lysophosphatidic acid (PubMed:18606822). Functions preferentially with 1-oleoyl- lysophosphatidic acid followed by 1-palmitoyl-lysophosphatidic acid, 1- stearoyl-lysophosphatidic acid and 1-arachidonoyl-lysophosphatidic acid as lipid acceptor. Functions preferentially with arachidonoyl-CoA followed by oleoyl-CoA as acyl group donors (By similarity). Functions in phosphatidic acid biosynthesis (PubMed:18606822). May regulate the cellular storage of triacylglycerol through activation of the phospholipase PNPLA2 (PubMed:16679289). Involved in keratinocyte differentiation (PubMed:18832586). Regulates lipid droplet fusion (By similarity).
Cellular Location	Cytoplasm. Lipid droplet {ECO:0000250|UniProtKB:Q9DBL9}. Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q9DBL9}. Note=Colocalized with PLIN and ADRP on the surface of lipid droplets. The localization is dependent upon the metabolic status of the adipocytes and the activity of PKA (By similarity).
Tissue Location	Widely expressed in various tissues, including lymphocytes, liver, skeletal muscle and brain. Expressed by upper epidermal layers and dermal fibroblasts in skin, hepatocytes and neurons (at protein level).

Background

Abhd5 belongs to a large family of proteins defined by an alpha/beta hydrolase fold, and contains three sequence motifs that correspond to a catalytic triad found in the esterase/lipase/thioesterase subfamily. It differs from other members of this subfamily in that its putative catalytic triad contains an asparagine instead of the serine residue. Mutations in this gene have been associated with Chanarin-Dorfman syndrome, a triglyceride storage disease with impaired long-chain fatty acid oxidation. Widely expressed in various tissues, including skin, lymphocytes, liver, skeletal muscle and brain.

Images

Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling



bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-ABHD5 Polyclonal Antibody, Unconjugated(AP58263) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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