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SERAC1 Rabbit pAb

Catalog # AP99383

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q96JX3
Other Accession	Q96JX3
Reactivity	Mouse
Predicted	Rat, Human, Rabbit, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	74147
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SERAC1
Epitope Specificity	401-500/654
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	Preservative: 0.02% Proclin300, Constituents: 1% BSA, 0.01M PBS, pH7.4.
SIMILARITY	Belongs to the SERAC1 family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is a phosphatidylglycerol remodeling protein found at the interface of mitochondria and endoplasmic reticula, where it mediates phospholipid exchange. The encoded protein plays a major role in mitochondrial function and intracellular cholesterol trafficking. Defects in this gene are a cause of 3-methylglutaconic aciduria with deafness, encephalopathy, and Leigh-like syndrome (MEGDEL). Two transcript variants, one protein-coding and the other non-protein coding, have been found for this gene. [provided by RefSeq, Aug 2012]

Additional Information

Gene ID	84947
Other Names	4930511N22Rik; D17Ertd141e; SRAC1_HUMAN; SERAC1; Serine active site-containing protein 1; SRAC1_MOUSE; serine active site containing 1
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	SERAC1
Function	Facilitates the transport of serine from the cytosol to the mitochondria by interacting with and stabilizing Sideroflexin-1 (SFXN1), a mitochondrial serine transporter, playing a fundamental role in the one-carbon cycle responsible for the synthesis of nucleotides needed for mitochondrial DNA replication (PubMed:35235340). Plays an important role in the phosphatidylglycerol (PG) remodeling that is essential for both mitochondrial function and intracellular cholesterol trafficking (PubMed:22683713). Specifically involved in the exchange of the sn-1 acyl chain from PG 16:0/18:1(9Z) (also known as 1-hexadecanoyl-2-(9Z-octadecenoyl)-sn-glycero-3-phospho-(1'-sn-glycerol)) to PG 18:0/18:1(9Z) (also known as 1-octadecanoyl-2-(9Z-octadecenoyl)-sn-glycero-3-phospho-(1'-sn-glycerol)), a step needed in the bis(monoacylglycerol)phosphate biosynthetic pathway (PubMed:22683713). May have acyltransferase activity although the mechanism for PG remodeling has not been determined (PubMed:22683713).
Cellular Location	Mitochondrion membrane {ECO:0000250|UniProtKB:Q3U213}; Single-pass membrane protein. Endoplasmic reticulum Mitochondrion. Note=Localizes at the endoplasmic reticulum and at the endoplasmic reticulum-mitochondria interface.
Tissue Location	Widely expressed, with predominant expression in skeletal muscle and brain (PubMed:22683713, PubMed:35235340). In the brain, highest levels are found in the frontal and occipital cortices, cerebellum and hippocampus (PubMed:22683713)

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