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SERAC1 Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20780a

Specification

SERAC1 Antibody (N-term) - Product Information

Application	**WB,E**
Primary Accession	Q96JX3
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**74147**

SERAC1 Antibody (N-term) - Additional Information

Gene ID 84947

Other Names
Protein SERAC1, Serine active site-containing protein 1, SERAC1

Target/Specificity
This SERAC1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 41-64 amino acids from the N-terminal region of human SERAC1.

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
SERAC1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

SERAC1 Antibody (N-term) - 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.

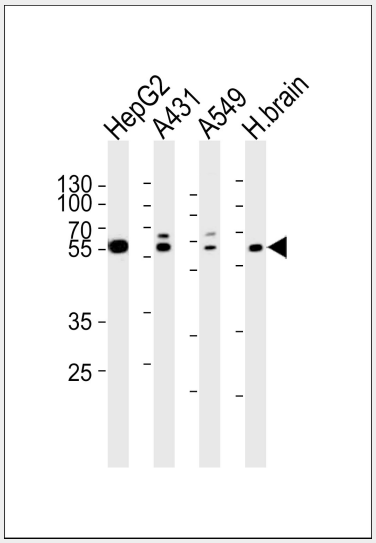
Tissue Location
Widely expressed, with predominant expression in skeletal muscle and brain (PubMed:22683713, PubMed:35235340). In the brain, highest levels are found in the frontal and occipital cortices, cerebellum and hippocampus (PubMed:22683713)

SERAC1 Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SERAC1 Antibody (N-term) - Images



Western blot analysis of lysates from HepG2, A431, A549 cell line and human brain tissue lysate(from left to right), using SERAC1 Antibody (N-term)(Cat. #AP20780a). AP20780a was

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diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.

SERAC1 Antibody (N-term) - Background

Plays an important role in the phosphatidylglycerol remodeling that is essential for both mitochondrial function and intracellular cholesterol trafficking. May catalyze the remodeling of phosphatidylglycerol and be involved in the transacylation- acylation reaction to produce phosphatidylglycerol-36:1. May be involved in bis(monoacylglycerol)phosphate biosynthetic pathway.

SERAC1 Antibody (N-term) - References

Ota T.,et al.Nat. Genet. 36:40-45(2004).
Mungall A.J.,et al.Nature 425:805-811(2003).
Tort F.,et al.Mol. Genet. Metab. 110:73-77(2013).
Wortmann S.B.,et al.Nat. Genet. 44:797-802(2012).