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SPINSTER Antibody

Catalog # ASC11751

Product Information

Application	WB, E
Primary Accession	Q9H2V7
Other Accession	NP_001135920, 215490098
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	56630
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	SPINSTER antibody can be used for detection of SPINSTER by Western blot at 1 - 2 □g/ml.

Additional Information

Gene ID	83985
Other Names	Protein spinster homolog 1, HSpin1, Spinster-like protein 1, SPNS1, SPIN1
Target/Specificity	SPNS1; SPINSTER antibody is human specific. At least four isoforms of SPINSTER are known to exist. This antibody is predicted to not cross-react with other members of the spinster family of proteins.
Reconstitution & Storage	SPINSTER antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	SPINSTER Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SPNS1
Synonyms	SPIN1
Function	Plays a critical role in the phospholipid salvage pathway from lysosomes to the cytosol (PubMed:36161949, PubMed:37075117). Mediates the rate-limiting, proton-dependent, lysosomal efflux of lysophospholipids, which can then be reacylated by acyltransferases in the endoplasmic reticulum to form phospholipids (PubMed:36161949, PubMed:37075117). Selective for zwitterionic headgroups such as lysophosphatidylcholine (LPC) and lysophosphatidylethanolamine (LPE), can also transport lysophosphatidylglycerol (LPG), but not other anionic lysophospholipids, sphingosine, nor sphingomyelin (PubMed:36161949). Transports

	lysophospholipids with saturated, monounsaturated, and polyunsaturated fatty acids, such as 1- hexadecanoyl-sn-glycero-3-phosphocholine, 1-(9Z-octadecenoyl)-sn- glycero-3-phosphocholine and 1-(4Z,7Z,10Z,13Z,16Z,19Z-docosahexaenoyl)- sn-glycero-3-phosphocholine, respectively (PubMed:36161949, PubMed:37075117). Can also transport lysoplasmalogen (LPC with a fatty alcohol) such as 1-(1Z-hexadecenyl)-sn-glycero-3-phosphocholine (PubMed:36161949). Lysosomal LPC could function as intracellular signaling messenger (PubMed:37075117). Essential player in lysosomal homeostasis (PubMed:36161949). Crucial for cell survival under conditions of nutrient limitation (PubMed:37075117). May be involved in necrotic or autophagic cell death (PubMed:12815463).
Cellular Location	Lysosome membrane; Multi-pass membrane protein Mitochondrion inner membrane; Multi-pass membrane protein. Note=Ocassionally localizes to mitochondria.

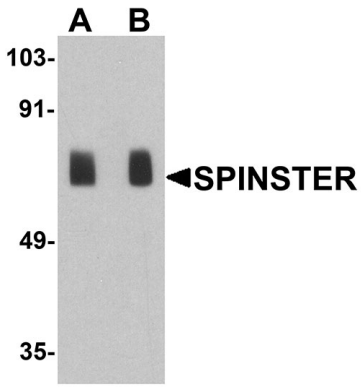
Background

SPINSTER, also known as SPNS1 or SPIN1, is a 528 amino acid multi-pass membrane protein that localizes to the inner mitochondrial membrane and belongs to the spinster subfamily of the major facilitator superfamily (1). SPINSTER interacts with Bcl-x and Bcl-2 and, via this interaction, is thought to be involved in necrotic or autophagic cell death (2). The related protein SPNS2 is critical for the normal lymphocyte localization and mammalian immune system function (1,3).

References

Saier MH Jr, Beatty JT, Goffeau A, et al. The major facilitator superfamily. J. Mol. Microbiol. Biotechnol. 1999; 1:257-79.
Yanagisawa H, Miyashita T, Nakano Y, et al. HSpin1, a transmembrane protein interacting with Bcl-2/Bcl-xL, induces a caspase-independent autophagic cell death. Cell Death Differ. 2003; 10:798-807.
Nakano Y, Fujitani K, Kurihara J, et al. Mutations in the novel membrane protein spinster interfere with programmed cell death and cause neural degeneration in Drosophila melanogaster. Mol. Cell. Biol. 2001; 21:3775-88.

Images



Western blot analysis of SPINSTER in human placenta tissue lysate with SPINSTER antibody at (A) 1 and (B) 2 µg/ml.

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