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SPINSTER Antibody
Catalog # ASC11751

Specification

SPINSTER Antibody - Product Information

Application	**WB**
Primary Accession	Q9H2V7
Other Accession	NP_001135920, 215490098
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 58 kDa** **Observed: 70 kDa KDa**
Application Notes	**SPINSTER antibody can be used for detection of SPINSTER by Western blot at 1 - 2 µg/ml.**

SPINSTER Antibody - Additional Information

Gene ID **83985**

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.

SPINSTER Antibody - 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.

SPINSTER Antibody - 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

SPINSTER Antibody - Images

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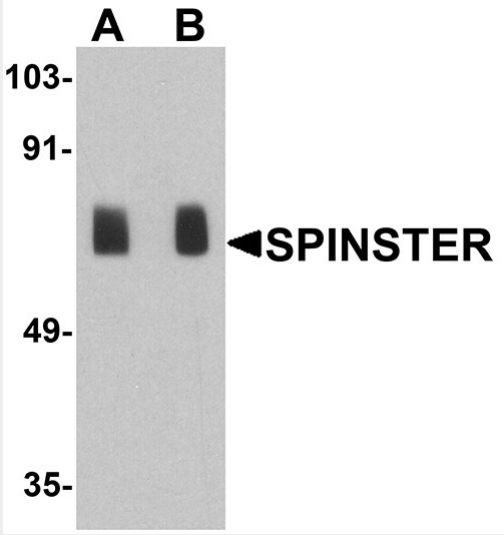

Western blot analysis of SPINSTER in human placenta tissue lysate with SPINSTER antibody at (A) 1 and (B) 2 µg/ml.

SPINSTER Antibody - 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).

SPINSTER Antibody - 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.