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SPPL3 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6313a

Product Information

Application	WB, E
Primary Accession	Q8TCT6
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB2276
Calculated MW	42261
Antigen Region	50-81

Additional Information

Gene ID	121665
Other Names	Signal peptide peptidase-like 3, SPP-like 3, 3423-, Intramembrane protease 2, IMP-2, Presenilin homologous protein 1, PSH1, Presenilin-like protein 4, SPPL3, IMP2, PSL4
Target/Specificity	This SPPL3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 50-81 amino acids from the N-terminal region of human SPPL3.
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 prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	SPPL3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SPPL3 {ECO:0000303|PubMed:12077416, ECO:0000312|HGNC:HGNC:30424}
Function	Intramembrane-cleaving aspartic protease (I-CLiP) that cleaves type II membrane protein substrates in or close to their luminal transmembrane domain boundaries (PubMed:16873890, PubMed:25354954,

PubMed:25827571). Acts like a sheddase by mediating the proteolytic release and secretion of active site-containing ectodomains of glycan-modifiying glycosidase and glycosyltransferase enzymes such as MGAT5, B4GAT1 and B4GALT1 (PubMed:25354954, PubMed:25827571). Catalyzes the intramembrane cleavage of the envelope glycoprotein gp130 and/or the leader peptide gp18LP of the simian foamy virus independent of prior ectodomain shedding by furin or furin-like proprotein convertase (PC)-mediated cleavage proteolysis (PubMed:23132852). May also have the ability to serve as a shedding protease for subsequent intramembrane proteolysis by SPPL2A and SPPL2B of the envelope glycoprotein gp130 (PubMed:23132852). Plays a role in the regulation of cellular glycosylation processes (PubMed:25354954). Required to link T-cell antigen receptor (TCR) and calcineurin-NFAT signaling cascades in lymphocytes by promoting the association of STIM1 and ORAI1 during store-operated calcium entry (SOCE) in a protease- independent manner (PubMed:25384971).

Cellular Location

Endoplasmic reticulum membrane; Multi-pass membrane protein. Golgi apparatus. Membrane; Multi-pass membrane protein; Lumenal side

Tissue Location

Widely expressed (PubMed:15385547). Expressed in the brain (PubMed:11978763).

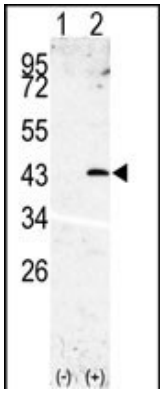
Background

Signal peptide peptidase (SPP) is an aspartyl protease that mediates clearance of signal peptides by proteolysis within the endoplasmic reticulum (ER). Like presenilins, SPP contains a critical GXGD motif in its C-terminal catalytic center. SPPL3 is one of several presenilin homologues/SPP-like proteins (PSHs/SPPL) that have been identified.

References

Grigorenko, A.P., et al., Biochemistry Mosc. 67(7):826-835 (2002).
Weihofen, A., et al., Science 296(5576):2215-2218 (2002).

Images



Western blot analysis of SPPL3(arrow) using rabbit polyclonal SPPL3 Antibody (N-term) (Cat.#AP6313a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the SPPL3 gene (Lane 2) (Origene Technologies).

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