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SPHK1 antibody - middle region

Rabbit Polyclonal Antibody
Catalog # AI14965

Product Information

Application	WB
Primary Accession	Q9NYA1
Other Accession	NM_001142601, NP_001136073
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Goat, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Chicken, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	42518

Additional Information

Gene ID	8877
Alias Symbol	SPHK
Other Names	Sphingosine kinase 1, SK 1, SPK 1, 2.7.1.91, SPHK1, SPHK, SPK
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-SPHK1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	SPHK1 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

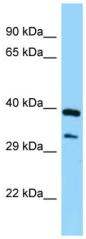
Name	SPHK1 (HGNC:11240)
Function	Catalyzes the phosphorylation of sphingosine to form sphingosine 1-phosphate (SPP), a lipid mediator with both intra- and extracellular functions. Also acts on D-erythro-sphingosine and to a lesser extent sphinganine, but not other lipids, such as D,L-threo- dihydrosphingosine, N,N-dimethylsphingosine, diacylglycerol, ceramide, or phosphatidylinositol (PubMed:11923095, PubMed:20577214, PubMed:23602659, PubMed:24929359, PubMed:29662056). In contrast to proapoptotic SPHK2, has a negative effect on intracellular ceramide levels, enhances cell growth and inhibits apoptosis (PubMed:16118219). Involved in the regulation of inflammatory response and neuroinflammation. Via the product sphingosine 1-phosphate, stimulates TRAF2 E3 ubiquitin ligase activity, and promotes

	activation of NF- kappa-B in response to TNF signaling leading to IL17 secretion (PubMed:20577214). In response to TNF and in parallel to NF-kappa-B activation, negatively regulates RANTES induction through p38 MAPK signaling pathway (PubMed:23935096). Involved in endocytic membrane trafficking induced by sphingosine, recruited to dilate endosomes, also plays a role on later stages of endosomal maturation and membrane fusion independently of its kinase activity (PubMed:24929359, PubMed:28049734). In Purkinje cells, seems to be also involved in the regulation of autophagosome-lysosome fusion upon VEGFA (PubMed:25417698).
Cellular Location	Cytoplasm. Nucleus. Cell membrane. Endosome membrane; Peripheral membrane protein. Membrane, clathrin-coated pit. Synapse {ECO:0000250|UniProtKB:Q8CI15} Note=Translocated from the cytoplasm to the plasma membrane in a CIB1- dependent manner (PubMed:19854831). Binds to membranes containing negatively charged lipids but not neutral lipids (PubMed:24929359) Recruited to endocytic membranes by sphingosine where promotes membrane fusion (By similarity). {ECO:0000250|UniProtKB:Q8CI15, ECO:0000269|PubMed:19854831, ECO:0000269|PubMed:24929359}
Tissue Location	Widely expressed with highest levels in adult liver, kidney, heart and skeletal muscle. Expressed in brain cortex (at protein level) (PubMed:29662056).

References

Melendez A.J.,et al.Gene 251:19-26(2000).
Nava V.E.,et al.FEBS Lett. 473:81-84(2000).
Pitson S.M.,et al.Biochem. J. 350:429-441(2000).
Van Veldhoven P.P.,et al.Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).

Images



WB Suggested Anti-SPHK1 Antibody Titration: 1.0 µg/ml
Positive Control: Fetal Lung

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