

# SPHK1 Antibody

Rabbit mAb

Catalog # AP91392

## Product Information

<b>Application</b>	WB, FC
<b>Primary Accession</b>	<a href="#">Q9NYA1</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Clonality</b>	Monoclonal
<b>Other Names</b>	SK1; Sphingosine kinase 1; SPHK; Sphk1; SPK;
<b>Isotype</b>	Rabbit IgG
<b>Host</b>	Rabbit
<b>Calculated MW</b>	42518

## Additional Information

<b>Dilution</b>	WB 1:500~1:2000 FC 1:50
<b>Purification</b>	Affinity-chromatography
<b>Immunogen</b>	A synthesized peptide derived from human SPHK1
<b>Description</b>	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.
<b>Storage Condition and Buffer</b>	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

## Protein Information

<b>Name</b>	SPHK1 ( <a href="#">HGNC:11240</a> )
<b>Function</b>	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: <a href="#">11923095</a> , PubMed: <a href="#">20577214</a> , PubMed: <a href="#">23602659</a> , PubMed: <a href="#">24929359</a> , PubMed: <a href="#">29662056</a> ). In contrast to proapoptotic SPHK2, has a negative effect on intracellular ceramide levels, enhances cell growth and inhibits apoptosis (PubMed: <a href="#">16118219</a> ). 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: <a href="#">20577214</a> ). 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

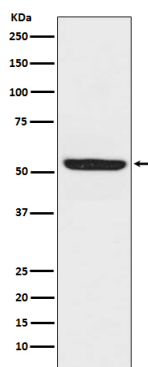
Cytoplasm. Nucleus. Cell membrane. Endosome membrane; Peripheral membrane protein. Membrane, clathrin-coated pit. Synapse {ECO:0000250|UniProtKB:Q8CI15} Note=Translocated from the cytoplasm to the plasma membrane in a CIB1- dependent manner (PubMed:19854831). Binds to membranes containing negatively 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).

## Images

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Western blot analysis of SPHK1 expression in Raji cell lysate.

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