

# **Anti-SPHK1 Monoclonal Antibody**

**Catalog # ABO14420** 

# **Specification**

# **Anti-SPHK1 Monoclonal Antibody - Product Information**

Application WB, FC
Primary Accession Q9NYA1
Host Rabbit
Isotype Rabbit IgG

Reactivity Rat, Human, Mouse

Clonality Monoclonal Format Liquid

**Description** 

Anti-SPHK1 Monoclonal Antibody . Tested in WB, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

# **Anti-SPHK1 Monoclonal Antibody - Additional Information**

**Gene ID 8877** 

### **Other Names**

Sphingosine kinase 1, SK 1, SPK 1, 2.7.1.91, Acetyltransferase SPHK1, 2.3.1.-, SPHK1 (<a href="http://www.genenames.org/cgi-bin/gene\_symbol\_report?hgnc\_id=11240" target=" blank">HGNC:11240</a>)

#### **Application Details**

WB 1:500-1:2000<br>FC 1:50

#### **Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

# Immunogen

A synthesized peptide derived from human SPHK1

### **Purification**

Affinity-chromatography

Storage Store at -20°C for one year. For short term

storage and frequent use, store at 4°C for

up to one month. Avoid repeated

freeze-thaw cycles.

## **Anti-SPHK1 Monoclonal Antibody - 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:<a href="http://www.uniprot.org/citations/11923095" target=" blank">11923095</a>, PubMed:<a href="http://www.uniprot.org/citations/20577214" target="blank">20577214</a>, PubMed:<a href="http://www.uniprot.org/citations/23602659" target=" blank">23602659</a>, PubMed:<a href="http://www.uniprot.org/citations/24929359" target="blank">24929359</a>, PubMed:<a href="http://www.uniprot.org/citations/29662056" target="\_blank">29662056</a>). In contrast to proapoptotic SPHK2, has a negative effect on intracellular ceramide levels, enhances cell growth and inhibits apoptosis (PubMed:<a href="http://www.uniprot.org/citations/16118219" target=" blank">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="http://www.uniprot.org/citations/20577214" target=" blank">20577214</a>). In response to TNF and in parallel to NF-kappa-B activation, negatively regulates RANTES induction through p38 MAPK signaling pathway (PubMed: <a href="http://www.uniprot.org/citations/23935096" target=" blank">23935096</a>). 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: <a href="http://www.uniprot.org/citations/24929359"

 $target="\_blank">24929359</a>, PubMed:<a href="http://www.uniprot.org/citations/28049734" target="\_blank">28049734</a>). In Purkinje cells, seems to be also involved in the regulation of autophagosome-lysosome fusion upon VEGFA (PubMed:<a$ 

href="http://www.uniprot.org/citations/25417698" target=" blank">25417698</a>).

#### **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).

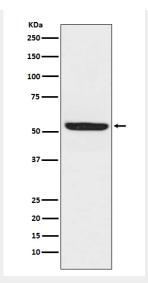
# **Anti-SPHK1 Monoclonal Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

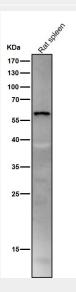
- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

#### Anti-SPHK1 Monoclonal Antibody - Images

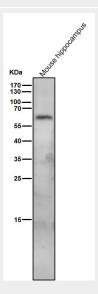




Western blot analysis of SPHK1 expression in Raji cell lysate.



All lanes use the Antibody at 1:1K dilution for 1 hour at room temperature.



All lanes use the Antibody at 1:1K dilution for 1 hour at room temperature.