

SphK2 Polyclonal Antibody
Catalog # AP72566**Specification****SphK2 Polyclonal Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	O9NRA0
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal

SphK2 Polyclonal Antibody - Additional Information**Gene ID** 56848**Other Names**

SPHK2; Sphingosine kinase 2; SK 2; SPK 2

Dilution

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/5000. Not yet tested in other applications.

IHC-P~~N/A

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions

-20°C

SphK2 Polyclonal Antibody - Protein Information**Name** SPHK2 ([HGNC:18859](#))**Synonyms** SK2**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-dihydrosphingosine, D- erythro-sphingosine and L-threo-dihydrosphingosine. Binds phosphoinositides (PubMed:12954646, PubMed:19168031). In contrast to prosurvival SPHK1, has a positive effect on intracellular ceramide levels, inhibits cells growth and enhances apoptosis (PubMed:16118219). In mitochondria, is important for cytochrome-c oxidase assembly and mitochondrial respiration. The SPP produced in mitochondria binds PHB2 and modulates the regulation via PHB2 of complex IV assembly and respiration (PubMed:20959514). In nucleus, plays a role in epigenetic regulation of gene expression. Interacts with HDAC1 and HDAC2 and,

through SPP production, inhibits their enzymatic activity, preventing the removal of acetyl groups from lysine residues with histones. Up-regulates acetylation of histone H3-K9, histone H4-K5 and histone H2B- K12 (PubMed:19729656). In nucleus, may have an inhibitory effect on DNA synthesis and cell cycle (PubMed:12954646, PubMed:16103110). In mast cells, is the main regulator of SPP production which mediates calcium influx, NF-kappa-B activation, cytokine production, such as TNF and IL6, and degranulation of mast cells (By similarity). In dopaminergic neurons, is involved in promoting mitochondrial functions regulating ATP and ROS levels (By similarity). Also involved in the regulation of glucose and lipid metabolism (By similarity).

Cellular Location

Cytoplasm. Nucleus. Endoplasmic reticulum {ECO:0000250|UniProtKB:Q9JIA7}. Mitochondrion inner membrane {ECO:0000250|UniProtKB:Q9JIA7}. Note=In nucleus, located in nucleosomes where it associates with core histone proteins such as histone 3 (PubMed:19729656). In brains of patients with Alzheimer's disease, may be preferentially localized in the nucleus. Cytosolic expression decrease correlates with the density of amyloid deposits (PubMed:29615132). In apoptotic cells, colocalizes with CASP1 in cell membrane where is cleaved and released from cells in an active form (PubMed:20197547).

Tissue Location

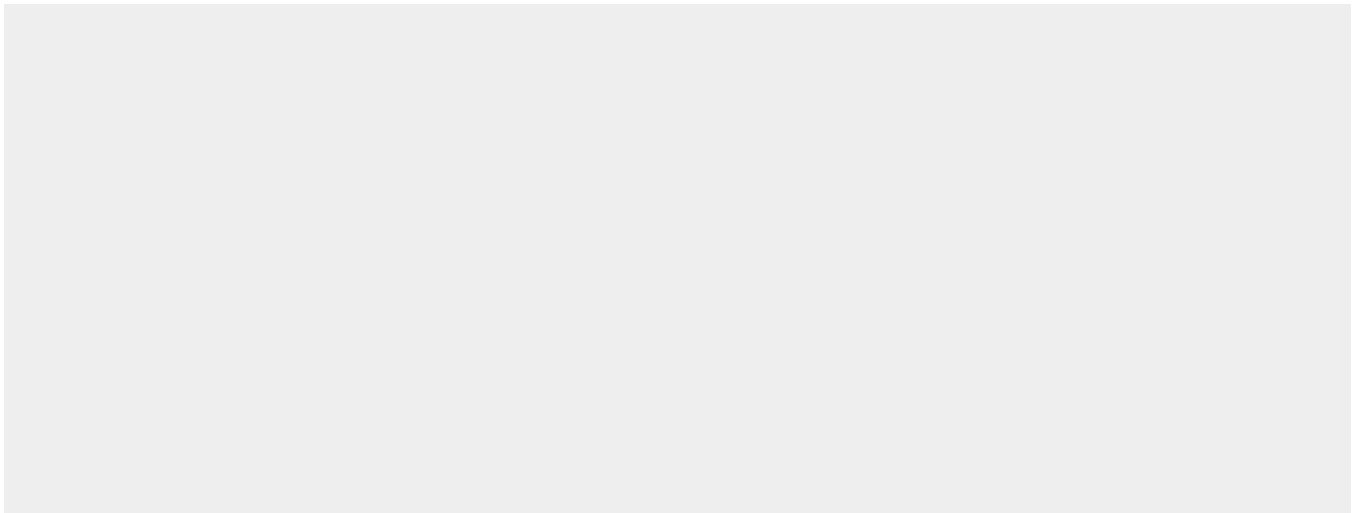
Mainly expressed in adult kidney, liver, and brain (PubMed:10751414). Expressed in cerebral cortex and hippocampus (at protein level) (PubMed:29615132). Isoform 1 is the predominant form expressed in most tissues (PubMed:16103110)

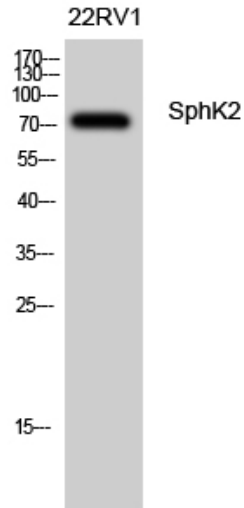
SphK2 Polyclonal Antibody - Protocols

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

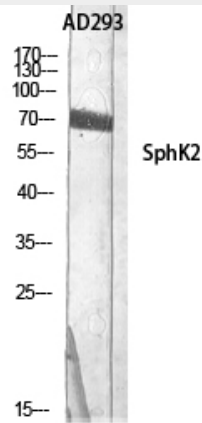
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SphK2 Polyclonal Antibody - Images





Western Blot analysis of 22RV1 cells using SphK2 Polyclonal Antibody diluted at 1:500



Western Blot analysis of AD293 using SphK2 Polyclonal Antibody diluted at 1:500

SphK2 Polyclonal Antibody - Background

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- dihydro sphingosine, D-erythro-sphingosine and L-threo- dihydro sphingosine. Binds phosphoinositides.