

## Sphingosine Kinase 2. Rabbit Antigen Immunoaffinity Purified Polyclonal , Human, Mouse, Rat

EC 2.7.1, SK 2, SPK 2, SPHK2, Gene name: SPHK2 or SPHK or SP

### BACKGROUND

Sphingosine Kinase 2 (Sphk2) catalyzes the phosphorylation of sphingosine to sphingosine 1-phosphate (S1P), an important signaling molecule with intra- and extracellular functions. Inside the cell S1P acts as a signaling molecule like other sphingolipid metabolites like ceramide and sphingosine. S1P has been implicated in regulating cell differentiation, calcium mobilization from intracellular stores, and apoptosis. The cell surface receptors for S1P are the EDG family of G protein-coupled receptors (S1P Receptors). These receptors couple to multiple G proteins (e.g. S1P<sub>1</sub> couples to Gi whereas S1P<sub>2</sub> and S1P<sub>3</sub> couple to Gq, G13 in addition to Gi) and regulate a extremely wide range of cellular events including cell motility, survival, apoptosis, migration and cell-cell interaction. Important roles for S1P have also been reported in regulation of cardiogenesis, vascular maturation, oocyte survival, immune cell trafficking, cells of the neuronal system and bone cells. S1P levels are regulated by the activity of Sphk (Sphk1 and Sphk2).

### ORDERING INFORMATION

**CATALOG NUMBER**  
X1628P

**SIZE**  
10 Miniblots

**FORM**  
Unconjugated

**HOST/CLONE**  
Rabbit

**FORMULATION**  
Provided as solution in phosphate buffered saline with 0.08% sodium azide

**CONCENTRATION**  
Lot specific, see vial label

**ISOTYPE**  
IgG

**APPLICATIONS**  
Western Blot, ELISA

### IMMUNOGEN

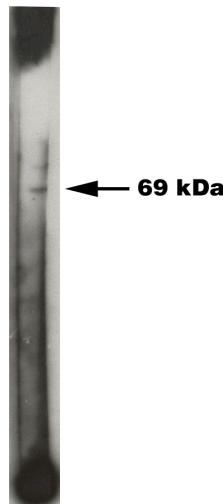
Synthetic peptide derived from the C-terminal of Sphingosine Kinase 2

### SPECIES REACTIVITY

Human, Mouse, Rat

### Legend:

Western blot analysis using Sphingosine Kinase 2 antibody on 50 ng of recombinant Sphingosine Kinase 2 enzyme (Cat. No. X1709E). Antibody used at 1:200 dilution. Visualized using Pierce West Femto substrate system. Secondary used at 1:30k dilution. Exposure for 45 seconds.



**For research use only. Not for use in human diagnostics or therapeutics.**

**POSITIVE CONTROL/TISSUE EXPRESSION**

Active Recombinant Sphingosine Kinase Enzyme (Cat. No. X1709E)

**COMMENTS**

Antibody can be used for Western blotting (1:50-1:200 dilution) and ELISA. Other applications not yet tested. Optimal concentration should be evaluated by serial dilutions.

**SHIP CONDITIONS**

Ship on dry ice, freeze upon arrival

**STORAGE CUSTOMER**

Product should be stored at -20°C. Aliquot to avoid freeze/thaw cycles

**STABILITY**

Products are stable for one year from purchase when stored properly

**REFERENCES**

1. Kihara A, Ikeda M, Kariya Y, Lee EY, Lee YM, Igarashi Y, Sphingosine-1-phosphate lyase is involved in the differentiation of F9 embryonal carcinoma cells to primitive endoderm. *J. Biol. Chem.* 278 (2003) 14578-14585
2. Choi OH, Kim JH, Kinet JP, Calcium mobilization via sphingosine kinase in signalling by the FcεR1 antigen receptor. *Nature* 380 (1996) 634-636
3. Olivera A, Kohama T, Edsall L, Nava V, Cuvillier O, Poulton S, Spiegel S, Sphingosine kinase expression increases intracellular sphingosine-1-phosphate and promotes cell growth and survival. *J. Cell Biol.* 147 (1999) 545-558
4. Chun J, Goetzl EJ, Hla T, Igarashi Y, Lynch KR, Moolenaar W, Pyne S, Tigyi G, International union of pharmacology. XXXIV. Lysophospholipid receptor nomenclature. *Pharmacol. Rev.* 54 (2002) 265-269
5. Hla T, Signaling and biological actions of sphingosine 1-phosphate. *Pharmacol. Res.* 47 (2003) 401-407
6. Gregorius K, Mouritsen S, Elsner HI, Hydrocoating: a new method for coupling biomolecules to solid phases. *J. Immunol. Methods*, 181 (1995) 65-73
7. Zhang JH, Chung TDY, Oldenburg KR, A simple statistical parameter for use in evaluation and validation of high throughput screening assays. *J. Biomol. Screening*, 4 (1999) 67-73
8. Hong Liu, Masako Sugiura, Victor E. Nava, Lisa C. Edsall, Keita Kono, Samantha Poulton, Sheldon Milstien, Takafumi Kohama, and Sarah Spiegel. Molecular Cloning and Functional Characterization of

**LAST MODIFIED** 1/29/2008

**For research use only. Not for use in human diagnostics or therapeutics.**