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Diagnostik & molekulare Diagnostik



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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic



Sphingosine Kinase 2. Rabbit Antigen Immunoaffinity Purified Polyclonal

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. S1P₁ couples to Gi whereas S1P₂ and S1P₃ 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

SPECIES REACTIVITY
Human, Mouse, Rat

ACCESSION NUMBER
Human AF245447

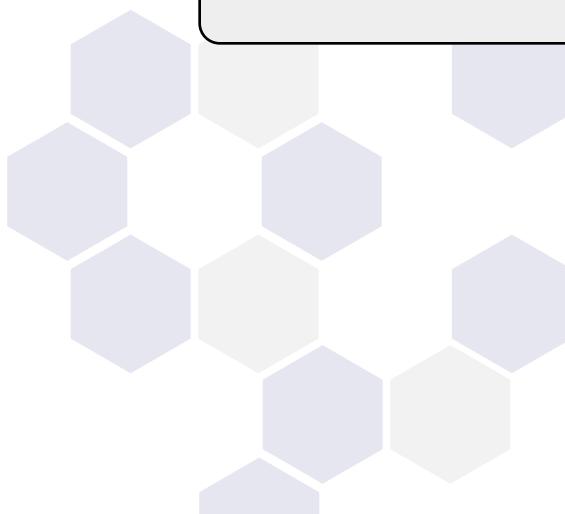
IMMUNOGEN

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

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.



← 69 kDa



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.

PURIFICATION

Antigen Immunoaffinity Purification

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 Fc ϵ RI 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, Goetzel 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
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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 a Novel Mammalian Sphingosine Kinase Type 2 Isoform. *J. Biol. Chem.*, Vol. 275, Issue 26, 19513-19520, June 30, 2000

Product Specific References:

1. Weigert, A., et al. 'Cleavage of sphingosine kinase 2 by caspase-1 provokes its release from apoptotic cells.' *Blood*, 2010, 115, 3531-3540.
2. Weigert, A., et al. 'Apoptotic cells promote macrophage survival by releasing the antiapoptotic mediator sphingosine -1-phosphate.' *Blood*, 2006, 108, 1635-1642.

PRODUCT SPECIFIC REFERENCES