

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Sphingosine Kinase 1/SPHK1 in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 647705
Purification	Protein A or G purified from cell culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Sphingosine Kinase 1/SPHK1 Asp2-Leu398 Accession # Q9NYA1
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Immunocytochemistry Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Sphingosine kinases are cytosolic or membrane-associated enzymes that catalyze the phosphorylation of sphingosine to sphingosine-1-phosphate (S1P). Two types of sphingosine kinases, SPHK1 and SPHK2, are known to be expressed in human cells. The two enzymes share considerable amino acid sequence similarity, but differ in their N-terminal and central regions (1). The two proteins also differ in tissue distribution and some kinetic properties (1). S1P is a lipid messenger that regulates diverse physiological processes including cell proliferation, migration, apoptosis, inflammation, calcium homeostasis and cytoskeletal structure (2, 3). The level of S1P is tightly controlled by SPHKs and S1P degrading enzymes. SPHK1 and its activation can be stimulated by several growth factors such as tumor necrosis factor-α, epidermal growth factor and transforming growth factor-β (3, 4). Expression of SPHK1 has been found to increase in many human solid tumors and overexpression of SPHK1 is associated with tumor angiogenesis (5). Such studies have implicated SPHK1 as a new target for cancer treatment.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.