# Active Recombinant Human SPHK1 protein, GST-tagged

**Cat. No.** SPHK1-174H **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant Human SPHK1 fused with an N-terminal GST tag was expressed in Insect cells. |
| **Species** | Human |
| **Source** | Insect Cells |
| **Description** | SPHK1 catalyzes the phosphorylation of sphingosine to form sphingosine-1-phosphate (SPP) which is a novel lipid messenger with both intracellular and extracellular functions. Various stimuli increase cellular levels of SPP by activation of SPHK1. Competitive inhibitors of SPHK1 block formation of SPP and selectively inhibit cellular proliferation induced by a variety of factors. SPHK1/sphingosine-1-phosphate pathway contributes to colon carcinogenesis. SPHK1 plays a key role in the generation and release of proinflammatory mediators triggered by anaphylatoxins from human macrophages and also is involved in the process of immune cell motility. |
| **Form** | 50mM Tris-HCl, pH 7.5, 150mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25mM DTT, 0.1mM PMSF, 25% glycerol. |
| **Bio-activity** | 500 nmol/min/mg |
| **Molecular Mass** | ~71 kDa |
| **Purity** | >70% |

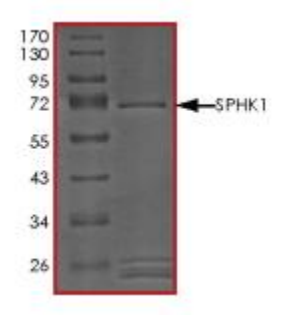
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| **Applications** | Kinase Assay |
| **Stability** | 1 year at -70 centigrade from the date of shipment |
| **Storage** | Store product at –70 centigrade. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. |
| **Concentration** | 0.1μg/μl |

## GENE INFORMATION

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| **Gene Name** | SPHK1 sphingosine kinase 1 [ Homo sapiens ] |
| **Official Symbol** | SPHK1 |
| **Synonyms** | SPHK1; sphingosine kinase 1; SPHK; SK 1; SPK 1; |
| **Gene ID** | 8877 |
| **mRNA Refseq** | NM_001142601 |
| **Protein Refseq** | NP_001136073 |
| **MIM** | 603730 |
| **UniProt ID** | Q9NYA1 |
| **Chromosome Location** | 17q25.2 |
| **Pathway** | Association of TriC/CCT with target proteins during biosynthesis, organism-specific |

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| | biosystem; Calcium signaling pathway, organism-specific biosystem; Calcium signaling pathway, conserved biosystem; Chaperonin-mediated protein folding, organism-specific biosystem; Fc gamma R-mediated phagocytosis, organism-specific biosystem; Fc gamma R-mediated phagocytosis, conserved biosystem; Fc-epsilon receptor I signaling in mast cells, organism-specific biosystem; |
| **Function** | ATP binding; D-erythro-sphingosine kinase activity; DNA binding; calmodulin binding; diacylglycerol kinase activity; magnesium ion binding; magnesium ion binding; nucleotide binding; protein binding; protein phosphatase 2A binding; sphinganine kinase activity; transferase activity; |
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