

Product datasheet for RC203398

SPHK1 (NM_021972) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SPHK1 (NM_021972) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SPHK1
Synonyms:	SPHK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC203398 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCTGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGGATCCAGTGGTGGTTGCGGACGTGGCCTCTTTGGTTTTGTTTTCTCAGCGGGCGGCCCGGGGCG
 TGCTCCCGCGGCCCTGCCGCTGCTGGTCTGCTGAACCCGCGCGGCGGCAAGGGCAAGGCTTGACGT
 CTTCCGGAGTCACGTGCAGCCCCCTTTGGCTGAGGCTGAAATCTCCTTCACGCTGATGCTCACTGAGCGG
 CGGAACCAACGCGGGGAGCTGGTGGGTGCGGAGGAGCTGGGCCGCTGGGACGCTCTGGTGGTCATGCTG
 GAGACGGGCTGATGCACGAGGTGGTGAACGGGCTCATGGAGCGGCTGACTGGGAGACCGCCATCCAGAA
 GCCCCTGTGTAGCCTCCCAGCAGGCTCTGGCAACGCGCTGGCAGCTTCCTTGAACCATTATGCTGGCTAT
 GAGCAGGTACCAATGAAGACCTCCTGACCAACTGCACGCTATTGCTGTGCCGCCGGCTGCTGTACCCCA
 TGAACCTGCTGTCTCTGCACACGGCTTCGGGGCTGCGCCTCTTCTCTGTGCTCAGCCTGGCCTGGGGCTT
 CATTGCTGATGTGGACCTAGAGAGTGAGAAGTATCGGCGTCTGGGGGAGATGCGCTTCACTCTGGGCACC
 TTCCTGCGTCTGGCAGCCCTGCGCACCTACCGCGGCCGACTGGCTACCTCCCTGTAGGAAGAGTGGGT
 CCAAGACACCTGCCTCCCCGTTGTGGTCCAGCAGGGCCCGGTAGATGCACACCTTGTGCCACTGGAGGA
 GCCAGTGCCCTCTCACTGGACAGTGGTGCCCGACGAGGACTTTGTGCTAGTCTGGCACTGCTGCACTCG
 CACCTGGGCAGTGAGATGTTTGTGCACCATGGGCCGCTGTGCAGCTGGCGTCATGCATCTGTTCTACG
 TCGGGGCGGGAGTGTCTCGTGCCATGCTGCTGCGCCTTCTCTGGCCATGGAGAAGGGCAGGCATATGGA
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 GTGTTTGCAGTGGATGGGGAATTGATGGTTAGCGAGGCCGTGCAGGGCCAGGTGCACCCAACTACTTCT
 GGATGGTCAGCGTTGCGTGGAGCCCCGCCAGCTGGAAGCCCCAGCAGATGCCACCGCCAGAAGAGCC
 CTTA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA


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Protein Sequence: >RC203398 protein sequence
 Red=Cloning site Green=Tags(s)

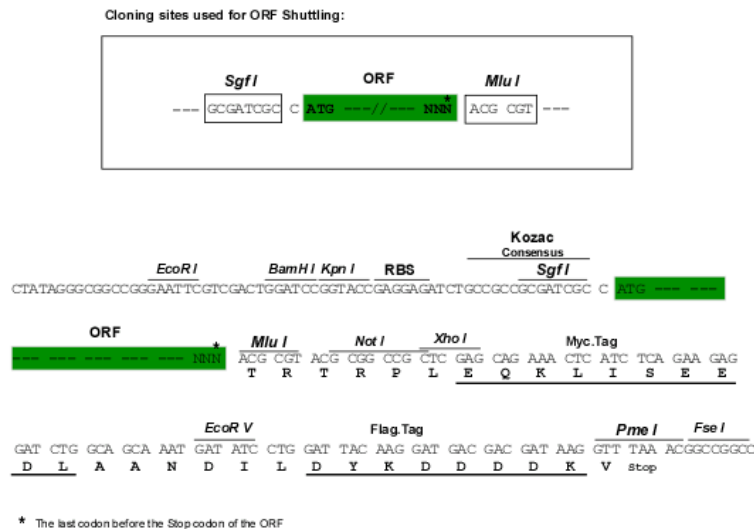
MDPVVGCGRGLFGFVFSAGGPRGVLPRPCRVLVLLNPRGGKGKALQLFRSHVQPLLAEAEISFTLMLTER
 RNHARELVRSEELGRWDALVVMGSDGLMHEVVNGLMERPDWETAIQKPLCSLPAGSGNALAASLNHYAGY
 EQVTNEDLLTNCTLLLCRRLSPMNLLSLHTASGLRFLSVLSLAWGFIADVDLESEKYRRLGEMRFTLGT
 FLRLAALRTYRRLAYLPVGRVGSKTPASPVVVQGPVDAHLVPLEEPVPSHWTVPDEDFVLVLALLHS
 HLGSEMF AAPMGRCAAGVMHLFYVRAGVSRAMLLRLFLAMEKGRHMEYECPLYLVYVPVVAFRLEPKDGKG
 VFAVDGELMVSEAVQGQVHPNYFWMVSGCVEPPPSWKPQQMPPEEPL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6154_g11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_021972

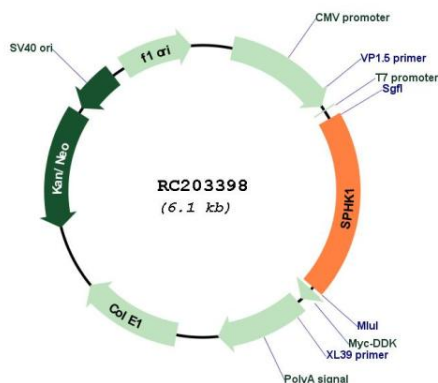
ORF Size: 1194 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

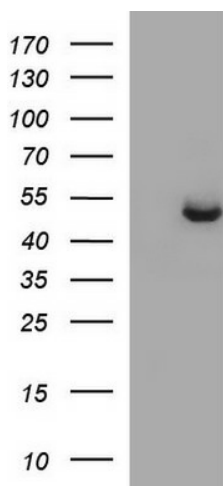
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_021972.4
RefSeq Size:	1881 bp
RefSeq ORF:	1197 bp
Locus ID:	8877
UniProt ID:	Q9NYA1
Cytogenetics:	17q25.1
Domains:	DAGKc
Protein Families:	Druggable Genome
Protein Pathways:	Calcium signaling pathway, Fc gamma R-mediated phagocytosis, Metabolic pathways, Sphingolipid metabolism, VEGF signaling pathway
MW:	43.9 kDa
Gene Summary:	The protein encoded by this gene catalyzes the phosphorylation of sphingosine to form sphingosine-1-phosphate (S1P), a lipid mediator with both intra- and extracellular functions. Intracellularly, S1P regulates proliferation and survival, and extracellularly, it is a ligand for cell surface G protein-coupled receptors. This protein, and its product S1P, play a key role in TNF-alpha signaling and the NF-kappa-B activation pathway important in inflammatory, antiapoptotic, and immune processes. Phosphorylation of this protein alters its catalytic activity and promotes its translocation to the plasma membrane. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Sep 2017]

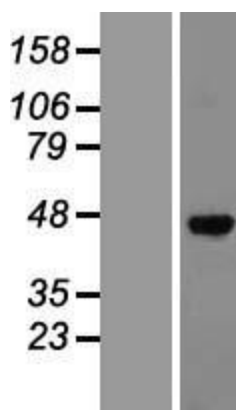
Product images:



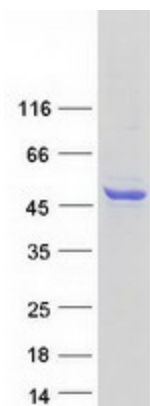
Circular map for RC203398



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SPHK1 (Cat# RC203398, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SPHK1 (Cat# [TA507215]). Positive lysates [LY411847] (100ug) and [LC411847] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY411847]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203398 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SPHK1 protein (Cat# [TP303398]). The protein was produced from HEK293T cells transfected with SPHK1 cDNA clone (Cat# RC203398) using MegaTran 2.0 (Cat# [TT210002]).