OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RG234661

SPHK2 (NM_001204159) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SPHK2 (NM_001204159) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SPHK2
Synonyms:	SK-2; SK 2; SPK-2; SPK 2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

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ORF Nucleotide Sequence:

>RG234661 representing NM_001204159
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAATGGACACCTTGAAGCAGAGGAGCAGCAGGACCAGAGGCCAGACCAGGAGCTGACCGGGAGCTGGG
GCCACGGGCCTAGGAGCACCCTGGTCAGGGCTAAGGCCATGGCCCCGCCCCCACCGCCACTGGCTGCCAG
CACCCCGCTCCTCCATGGCGAGTTTGGCTCCTACCCAGCCCGAGGCCCACGCTTTGCCCTCACCCTTACA
TCGCAGGCCCTGCACATACAGCGGCTGCGCCCCAAACCTGAAGCCAGGCCCCGGGGTGGCCTGGTCCCGT
TGGCCGAGGTCTCAGGCTGCTGCACCCTGCGAAGCCGCAGCCCCTCAGACTCAGCGGCCTACTTCTGCAT
CTACACCTACCCTCGGGGCCGGCGCGGGGCCCGGCGCAGAGCCACTCGCACCTTCCGGGCAGATGGGGCC
GCCACCTACGAAGAGAACCGTGCCGAGGCCCAGCGCTGGGCCACTGCCCTCACCTGTCTGCTCCGAGGAC
TGCCACTGCCCGGGGATGGGGAGATCACCCCTGACCTGCTACCTCGGCCGCCCCGGTTGCTTCTATTGGT
CAATCCCTTTGGGGGTCGGGGCCTGGCCTGGCAGTGGTGTAAGAACCACGTGCTTCCCATGATCTCTGAA
GCTGGGCTGTCCTTCAACCTCATCCAGACAGAACGACAGAACCACGCCCGGGAGCTGGTCCAGGGGCTGA
GCCTGAGTGAGTGGGATGGCATCGTCACGGTCTCGGGAGACGGGCTGCTCCATGAGGTGCTGAACGGGCT
CCTAGATCGCCCTGACTGGGAGGAAGCTGTGAAGATGCCTGTGGGCATCCTCCCCTGCGGCTCGGGCAAC
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GCTCACTGTTGCTGTGCCGGGGTGGTGGCCACCCACTGGACCTGCTCTCCGTGACGCTGGCCTCGGGCTC
CCGCTGTTTCTCCTTCCTGTCTGTGGCCTGGGGCTTCGTGTCAGATGTGGATATCCAGAGCGAGCGCTTC
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CCCGTAATTCCCCCATCCTCTGGGCTCCCACTTCCCACCCCTGATGCCCGGGTAGGGGCCTCCACCTGCG
GCCCGCCCGACCACCTGCTGCCTCCGCTGGGCACCCCGCTGCCCCCAGACTGGGTGACGCTGGAGGGGGA
CTTTGTGCTCATGTTGGCCATCTCGCCCAGCCACCTAGGCGCTGACCTGGTGGCAGCTCCGCATGCGCGC
TTCGACGACGGCCTGGTGCACCTGTGCTGGGTGCGTAGCGGCATCTCGCGGGCTGCGCTGCTGCGCCTTT
TCTTGGCCATGGAGCGTGGTAGCCACTTCAGCCTGGGCTGTCCGCAGCTGGGCTACGCCGCGGCCCGTGC
CTTCCGCCTAGAGCCGCTCACACCACGCGGCGTGCTCACAGTGGACGGGGAGCAGGTGGAGTATGGGCCG
CTACAGGCACAGATGCACCCTGGCATCGGTACACTGCTCACTGGGCCTCCTGGCTGCCCGGGGCGGGAGC
CC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

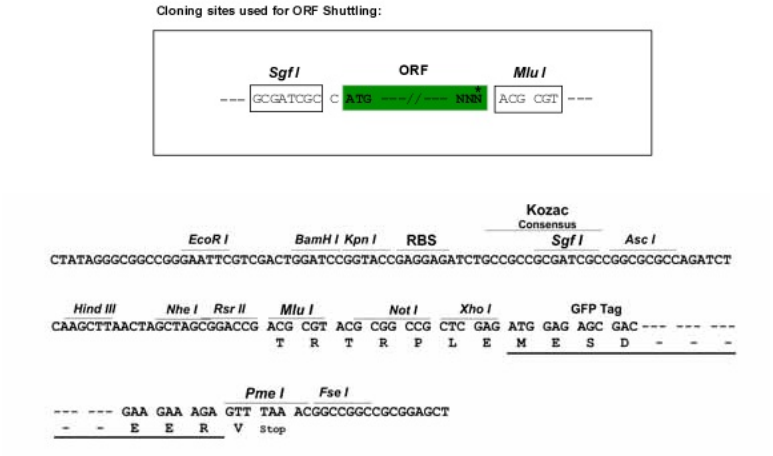
>RG234661 representing NM_001204159
Red=Cloning site Green=Tags(s)

MNGHLEAEEQQDQRPDQELTGSWGHGPRSTLVRAKAMAPPPPPLAASTPLLHGEFGSYPARGPRFALTLT
SQALHIQRLRPKPEARPRGGLVPLAEVSGCCTLRSRSPSDSAAYFCIYTYPRGRRGARRRATRTFRADGA
ATYEENRAEAQRWATALTCLLRGLPLPGDGEITPDLLPRPPRLLLLVNPFGGRGLAWQWCKNHVLPMISE
AGLSFNLIQTERQNHARELVQGLSLSEWDGIVTVSGDGLLHEVLNGLLDRPDWEEAVKMPVGILPCGSGN
ALAGAVNQHGGFEPALGLDLLLNCSLLLCRGGGHPLDLLSVTLASGSRCFSFLSVAWGFVSDVDIQSERF
RALGSARFTLGTVLGLATLHTYRGRLSYLPATVEPASPTPAHSLPRAKSELTLTPDPAPPMAHSPLHRSV
SDLPLPLPQPALASPGSPEPLPILSLNGGGPELAGDWGGAGDAPLSPDPLLSSPPGSPKAALHSPVSEGA
PVIPPSSGLPLPTPDARVGASTCGPPDHLLPPLGTPLPPDWVTLEGDFVLMLAISPSHLGADLVAAPHAR
FDDGLVHLCWVRSGISRAALLRLFLAMERGSHFSLGCPQLGYAAARAFRLEPLTPRGVLTVDGEQVEYGP
LQAQMHPGIGTLLTGPPGCPGREP

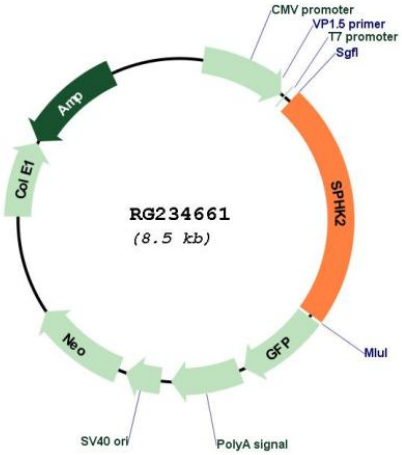
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_001204159
ORF Size:	1962 bp
OTI Disclaimer:	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:	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.
RefSeq:	NM_001204159.3

RefSeq Size:	2868 bp
RefSeq ORF:	1965 bp
Locus ID:	56848
UniProt ID:	Q9NRA0
Cytogenetics:	19q13.33
Protein Families:	Druggable Genome
Protein Pathways:	Calcium signaling pathway, Fc gamma R-mediated phagocytosis, Metabolic pathways, Sphingolipid metabolism, VEGF signaling pathway
Gene Summary:	This gene encodes one of two sphingosine kinase isozymes that catalyze the phosphorylation of sphingosine into sphingosine 1-phosphate. Sphingosine 1-phosphate mediates many cellular processes including migration, proliferation and apoptosis, and also plays a role in several types of cancer by promoting angiogenesis and tumorigenesis. The encoded protein may play a role in breast cancer proliferation and chemoresistance. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Aug 2011]