

## Product datasheet for **RC208705**

### **SGPL1 (NM\_003901) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	SGPL1 (NM_003901) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SGPL1
Synonyms:	NPHS14; S1PL; SPL
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>RC208705 representing NM\_003901  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCCTAGCACAGACCTTCTGATGTTGAAGGCCTTTGAGCCCTACTTAGAGATTTTGAAGTATACTCCA  
 CAAAAGCCAAGAATTATGTAATGGACATTGCACCAAGTATGAGCCCTGGCAGCTAATTGCATGGAGTGT  
 CGTGTGGACCCTGCTGATAGTCTGGGGATATGAGTTTGTCTCCAGCCAGAGAGTTTATGGTCAAGGTTT  
 AAAAAGAAATGTTTTAAGCTCACCAGGAAGATGCCATTATTGGTCGTAAGATTCAAGACAAGTTGAACA  
 AGACCAAGGATGATATTAGCAAGAACATGTCATTCTGAAAGTGGACAAAGAGTATGTGAAAGCTTTACC  
 CTTCCAGGGTCTGAGCTCATCTGCTGTTTTGGAGAACTTAAGGAGTACAGCTCTATGGACGCCTTCTGG  
 CAAGAGGGGAGAGCCTCTGGAACAGTGTACAGTGGGGAGGAGAAGCTCACTGAGCTCCTTGTGAAGGCTT  
 ATGGAGATTTTGCATGGAGTAACCCCTGCATCCAGATATCTCCAGGACTACGCAAGATAGAGGCAGA  
 AATTGTGAGGATAGCTTGTCCCTGTTCAATGGGGGACCAGATTCGTGTGGATGTGTGACTTCTGGGGGA  
 ACAGAAAGCATACTGATGGCCTGCAAAGCATATCGGGATCTGGCCTTTGAGAAGGGGATCAAACCTCCAG  
 AAATTGTGGCTCCCAAAGTGCCATGCTGCATTTAACAAAGCAGCCAGTTACTTTGGGATGAAGATTGT  
 GCGGGTCCATTGACGAAGATGATGGAGGTGGATGTGCGGGCAATGAGAAGAGCTATCTCCAGGAACACT  
 GCCATGCTCGTCTGTTCTACCCACAGTTTCTCATGGTGAATAGATCCTGTCCCTGAAGTGGCCAAGC  
 TGGCTGTCAAATACAAAATACCCCTTATGTGACGCTTGTCTGGGAGGCTTCTCATCGTCTTTATGGA  
 GAAAGCAGGATACCCACTGGAGCACCCATTTGATTTCCGGGTGAAAGGTGTAACCAAGCATTTCAGCTGAC  
 ACCCATAAGTATGGCTATGCCCAAAAGGCTCATCATTGGTGTGTATAGTGACAAGAAGTACAGGAAT  
 ATCAGTTCTTCGTCGATACAGATTGGCAGGGTGCATCTATGCTTCCCAACCATCGCAGGCTCACGGCC  
 TGGTGGCATTAGCGCAGCCTGTTGGGCTGCCTTGATGCACTTCGGTGAGAACGGCTATGTTGAAGCTACC  
 AAACAGATCATAAAAGTCTCGCTTCCCAAGTCAAGTCAAGTCAAGTCAAGTCAAGTCAAGTCAAGTCAAGT  
 GGAATCCCAATTGTCAGTCATTGCTCTGGGATCCCGTGATTTTGACATCTACCGACTATCAAACCTGAT  
 GACTGCTAAGGGGTGGAACCTGAACAGTTGCAGTTCCACCCAGTATTCATTTCTGCATCACATTACTA  
 CACGCCCGAAACGAGTAGCTATACAATCCTAAAGGACATTGAGAACTGTCACTCAAATCATGAAGA  
 ATCCTAAAGCGAAGACCACAGGAATGGTGCCATCTATGGCATGGCCAGACAACGTTGACAGGAATAT  
 GGTTCAGAAATTGCTCCTCAGTCTTCTGGACAGCTGTACAGCACCGACACTGTCACCCAGGGCAGCCAG  
 ATGAATGGTTCTCAAACCCAC

**ACGCGT**ACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC208705 representing NM\_003901  
 Red=Cloning site Green=Tags(s)

MPSTDLLMLKAFEPYLEILEVYSTKAKNYVNGHCTKYEPWQLIAWSVVWTLIVWGYEFVFPESLWSRF  
 KKKCFKLTRKMPIIGRKIQDKLNKTKDDISKNMSFLKVDKEYVKALPSQGLSSSAVLEKLEYSSMDAFW  
 QEGRASGTVYSGEEKLLELLVKAYGDFAWSNPLHPDIFPGLRKIEAEIVRIACSLFNGGPDSCGCVTSSG  
 TESILMACKAYRDLAFEKGIKTPEIVAPQSAHAAFNKAASYFGMKIVRVPLTKMMEVDVDRAMRAISRNT  
 AMLVCSTPQFPHGVIDPVPEVAKLAVKYKIPLHVDACLGGFLIVFMEKAGYPLEHPDFRVKGVTSISAD  
 THKYGYAPKGSSLVLYSDKKYRNYQFFVDTDWQGGIYASPTIAGSRPGGISAACWAALMHFGENGYVEAT  
 KQIIKTARFLKSELENIKGIFFVGNPQLSVIALGSRDFDIYRLSNLMTAKGWNLNQLQFPPIHFCITLL  
 HARKRVAIQFLKDIRESVTQIMKNPKAKTTGMGAIYGMAQTTVDRNMVAELSSVFLDSLSTDTVTQGSQ  
 MNGSPKPH

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mg3876\\_h05.zip](https://cdn.origene.com/chromatograms/mg3876_h05.zip)

**Restriction Sites:**

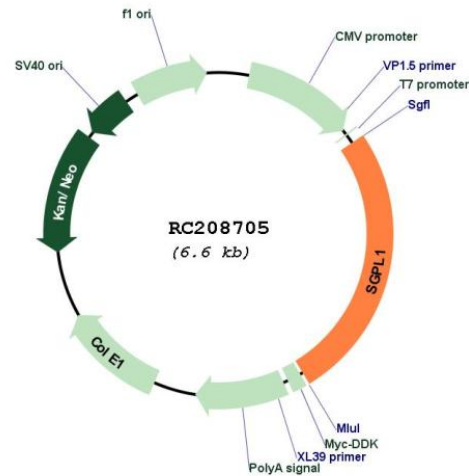
Sgfl-Mlul

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



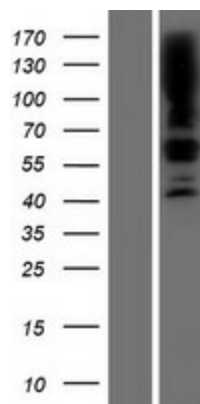
\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


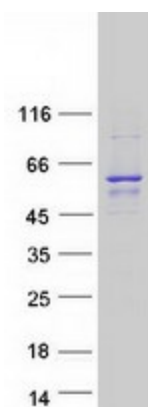
ACCN: NM\_003901

ORF Size: 1704 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_003901.2</a> , <a href="#">NP_003892.2</a>
<b>RefSeq Size:</b>	4701 bp
<b>RefSeq ORF:</b>	1707 bp
<b>Locus ID:</b>	8879
<b>UniProt ID:</b>	<a href="#">O95470</a>
<b>Cytogenetics:</b>	10q22.1
<b>Domains:</b>	pyridoxal_deC
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Metabolic pathways, Sphingolipid metabolism
<b>MW:</b>	63.3 kDa
<b>Gene Summary:</b>	Cleaves phosphorylated sphingoid bases (PSBs), such as sphingosine-1-phosphate, into fatty aldehydes and phosphoethanolamine. Elevates stress-induced ceramide production and apoptosis (PubMed:11018465, PubMed:14570870, PubMed:24809814, PubMed:28165339). Required for global lipid homeostasis in liver and cholesterol homeostasis in fibroblasts. Involved in the regulation of pro-inflammatory response and neutrophil trafficking. Modulates neuronal autophagy via phosphoethanolamine production which regulates accumulation of aggregate-prone proteins such as APP (By similarity). Seems to play a role in establishing neuronal contact sites and axonal maintenance (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**

Western blot validation of overexpression lysate (Cat# [LY418357]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208705 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SGPL1 protein (Cat# [TP308705]). The protein was produced from HEK293T cells transfected with SGPL1 cDNA clone (Cat# RC208705) using MegaTran 2.0 (Cat# [TT210002]).