

## Product datasheet for RC227444

### Spingomyelin Synthase 2 (SGMS2) (NM\_001136258) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Spingomyelin Synthase 2 (SGMS2) (NM_001136258) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Spingomyelin Synthase 2
Synonyms:	CDL; SMS2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC227444 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCCGGATCGCC

ATGGATATCATAGAGACAGCAAACTTGAAGAACATTTGGAAAATCAACCCAGTGATCCTACGAACACTT  
ATGCAAGACCCGCTGAACCTGTTGAAGAAGAAAACAAAATGGCAATGGTAAACCAAGAGCTTATCCAG  
TGGGCTGCGAAAAGGCACCAAAAAGTACCCGGACTATATCCAAATTGCTATGCCCACTGAATCAAGGAAC  
AAATTTCCACTAGAGTGGTGGAAAACGGGCATTGCCTTCATATATGCAGTTTTCAACCTCGTCTTGACAA  
CCGTCATGATCACAGTTGTACATGAGAGGGTCCCTCCCAAGGAGCTTAGCCCTCCACTCCAGACAAGTT  
TTTTGATTACATTGATAGGGTGAATGGGCATTTTCTGTATCAGAAATAAATGGGATTATATTAGTTGGA  
TTATGGATCACCCAGTGGCTGTTTCTGAGATACAAGTCAATAGTGGGACGCAGATTCTGTTTTATTATTG  
GAACCTTATACCTGTATCGCTGCATTACAATGTATGTTACTACTACCTGTGCCTGGAATGCATTTCCA  
GTGTGCTCCAAAGCTCAATGGAGACTCTCAGGCAAAAGTTCAACGGATTCTACGATTGATTTCTGGTGGT  
GGATTGTCCATAACTGGATCACATATCTTATGTGGAGACTTCTCTTTCAGCGGTACACGGTTACGCTGA  
CACTGACTTATTTGTTCAAAAGAATATTCGCCTCGTCACTTCTGGTGGTATCATTTAATCTGCTGGCT  
GCTGAGTGCTGCCGGGATCATCTGCATTCTTGTAGCACACGAACACTACACTATCGATGTGATCATTGCT  
TATTATACACAACAGACTGTTTTGGTGGTACCATTCAATGGCCAATGAAAAGAAGTTGAAGGCTCTTT  
CACAGACTAATTTCTTATCTCGAGCATGGTGGTTCCCATCTTTTATTTTTTTGAGAAAAATGTACAAGG  
CTCAATTCCTTGCTGCTTCTCCTGGCCGCTGTCTTGGCCTCCTGGCTGCTTCAAATCATCATGCAAAAAG  
TATTCACGGGTTGAGAAGATTGGTGAAGACAATGAGAAATCGACC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC227444 protein sequence  
Red=Cloning site Green=Tags(s)

MDIETAKLEEHLNQPSDPTNTYARPAEPVEEENKNGNGKPKSLSSGLRKGTKKYPDYIQIAMPTESRN  
 KFPLEWWTGIAFIYAVFNLVLTVMITVVHERVPPKELSPPLPDKFFDYIDRVKWFVSVSEINGIILVG  
 LWITQWFLRYKSIVGRRFCFIIGTLYLRCITMYVTTLPVPGMHFQCAPKLNQDSQAKVQRILRLISGG  
 GLSITGSHILCGDFLFSGHTVTLTLTYLFIKEYSPRHFWYHLICWLLSAAGIICILVAHEHYTIDVIIA  
 YYITTRLFWYHSMANEKNLKVSSQTNFLSRAWWFPIFYFFEKNVQGSIPCCFSWPLSWPPGCFKSSCKK  
 YSRVQKIGEDNEKST

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6341\\_g01.zip](https://cdn.origene.com/chromatograms/mk6341_g01.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001136258

**ORF Size:** 1095 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\\_001136258.2](#)

**RefSeq Size:** 6162 bp

**RefSeq ORF:** 1098 bp

**Locus ID:** 166929

**UniProt ID:** [Q8NHU3](#)

**Cytogenetics:** 4q25

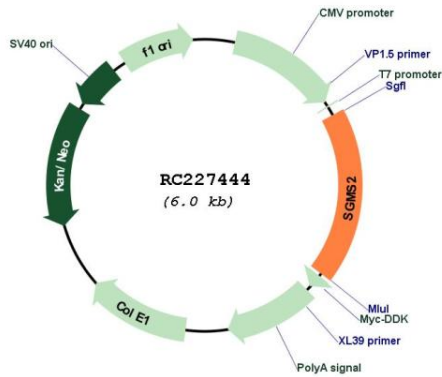
**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Metabolic pathways, Sphingolipid metabolism

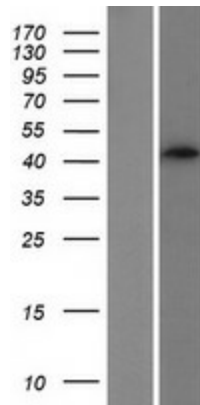
**MW:** 42.3 kDa

**Gene Summary:** Sphingomyelin, a major component of cell and Golgi membranes, is made by the transfer of phosphocholine from phosphatidylcholine onto ceramide, with diacylglycerol as a side product. The protein encoded by this gene is an enzyme that catalyzes this reaction primarily at the cell membrane. The synthesis is reversible, and this enzyme can catalyze the reaction in either direction. The encoded protein is required for cell growth. Three transcript variants encoding the same protein have been found for this gene. There is evidence for more variants, but the full-length nature of their transcripts has not been determined.[provided by RefSeq, Oct 2008]

Product images:



Circular map for RC227444



Western blot validation of overexpression lysate (Cat# [LY427870]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC227444 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).