

## Product datasheet for RR211313

### Sgms2 (NM\_001014043) Rat Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Sgms2 (NM_001014043) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Sgms2
Synonyms:	RGD1305778; spermatin
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RR211313 representing NM_001014043 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGATATCATAGAGACAGCAAACTTGAAGGTCATTTGGAAAGTCAAACCAACAACCTCTACCAACACTT  
ACACAAGCCCCACTGAAGCTGTAGAAGAGGAGGACAAAAATGGCAAGGGTAAACCAAGACCTTATCCAA  
CGGGCTACGAAAGGGTGCCAAGAAATACCCGGACTACATCCAGATTTCCATGCCCAATGACTCCAGGAAC  
AAGCTTCCCTAGAGTGGTGGAAAACAGGCATTGCCTTTGTGTACGCTCTTCAACCTTATCCTGACAA  
CAGTCATGATCACCGTTGTGCACGAGAGGGTCCCTCCAAGGAACCTCAGCCCTCCACTCCAGACAAGTT  
TTTTGATTACGTCGACCGGGTCAAATGGGCATTTTCTGTATCAGAAATAAATGGGATGGTATTAGTTGGG  
CTATGGCTCACCCAGTGGCTCTTCTGAGATACAAGTCAATAGTGGGACGCAGATTTCTTCTTATCATGG  
GAACCTTATACCTGTATCGCTGTATAACTATGTACGCTACTACGTTACCTGTGCCCGGAATGCACCTCCA  
GTGTGCTCCAAAGCTCAATGGAGACTCTCAGGCAAAAATACAACGGATTCTCCGGTTGCTTCTGGTGGT  
GGATTGTCATCACGGGATCACACATCCTGTGTGGAGACTTCTCTTCCAGCGCCATACAGTTGTGCTGA  
CACTTACTTACTGTTCATCAAAGAATATTCACCTCGTCACTTCTGGTGGTACCCTTGGTCTGTGGCT  
GCTGAGCGCCGCTGGGATCGTCTGCATCCTCGTGGCGCACGAACACTACACGGTGCATGTCATCATTGCG  
TATTACATCACAACACGGCTGTTTTGGTGGTACCCTCCATGGCCAATGAAAAGAACCTTGAAGGTCTCT  
CCAGACTAATTTCTTGTCTCGGGCTGGTGGTTCCCATCTTCTATTTTTTTGAAAAGAATGTGCAAGG  
CTCCATTCCTTGTGTTTCTCCTGGCCGCTGCTGCGCCCTGGCTGCTTCAAGTCATCGTGCAAAAAG  
TATTCTCGAGTCCAGAAGATCGGGGAGGATAATGAGAAGTCTACC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



[View online »](#)

**Protein Sequence:** >RR211313 representing NM\_001014043  
Red=Cloning site Green=Tags(s)

MDI IETAKLEGHLESQTNNSTNTYTSPTEAVEEEDKNGKGP KTL SNGLRKGAKKYPDYIQI SMPNDSRN  
 KLPLEWWTGIAFVYALFNLILTTVMITVVHERVPPKELSPPLPDKFFDYVDRVKWAFSVSEINGMVLVG  
 LWLTQWFLRYKSIVGRRFFIFMGTLYLRCITMYVTTLPVPGMHFQCAPKLNQDSQAKIQRILRLSSGG  
 GLSITGSHILCGDFLFSGHTVVLTLTYLFIKEYSPRHFWYHLVCWLLSAAGIVCILVAHEHYTVDVIAA  
 YYITTRLFWWYHSMANEKNLKVSSQTNFLSRAWFPFIFYFFEKNVQGSIPCCFSWPLSWPPGCFKSSCKK  
 YSRVQKIGEDNEKST

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



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

**ACCN:** NM\_001014043

**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\\_001014043.1](#), [NP\\_001014065.1](#)

**RefSeq Size:** 1924 bp

**RefSeq ORF:** 1098 bp

**Locus ID:** 310849

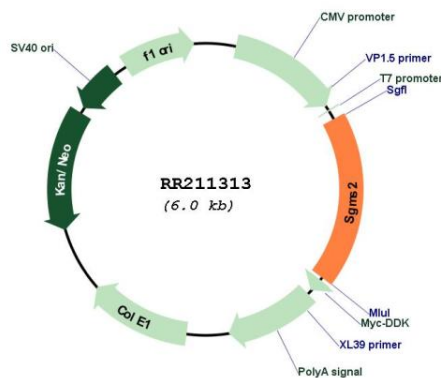
**UniProt ID:** [Q4JM44](#)

**Cytogenetics:** 2q43

**MW:** 42.2 kDa

**Gene Summary:** Sphingomyelin synthases synthesize the sphingolipid, sphingomyelin, through transfer of the phosphatidyl head group, phosphatidylcholine, on to the primary hydroxyl of ceramide. The reaction is bidirectional depending on the respective levels of the sphingolipid and ceramide. Plasma membrane SMS2 can also convert phosphatidylethanolamine (PE) to ceramide phosphatidylethanolamine (CPE). Major form in liver. Required for cell growth in certain cell types. Regulator of cell surface levels of ceramide, an important mediator of signal transduction and apoptosis. Regulation of sphingomyelin (SM) levels at the cell surface affects insulin sensitivity (By similarity).[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for RR211313